United States
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Economic
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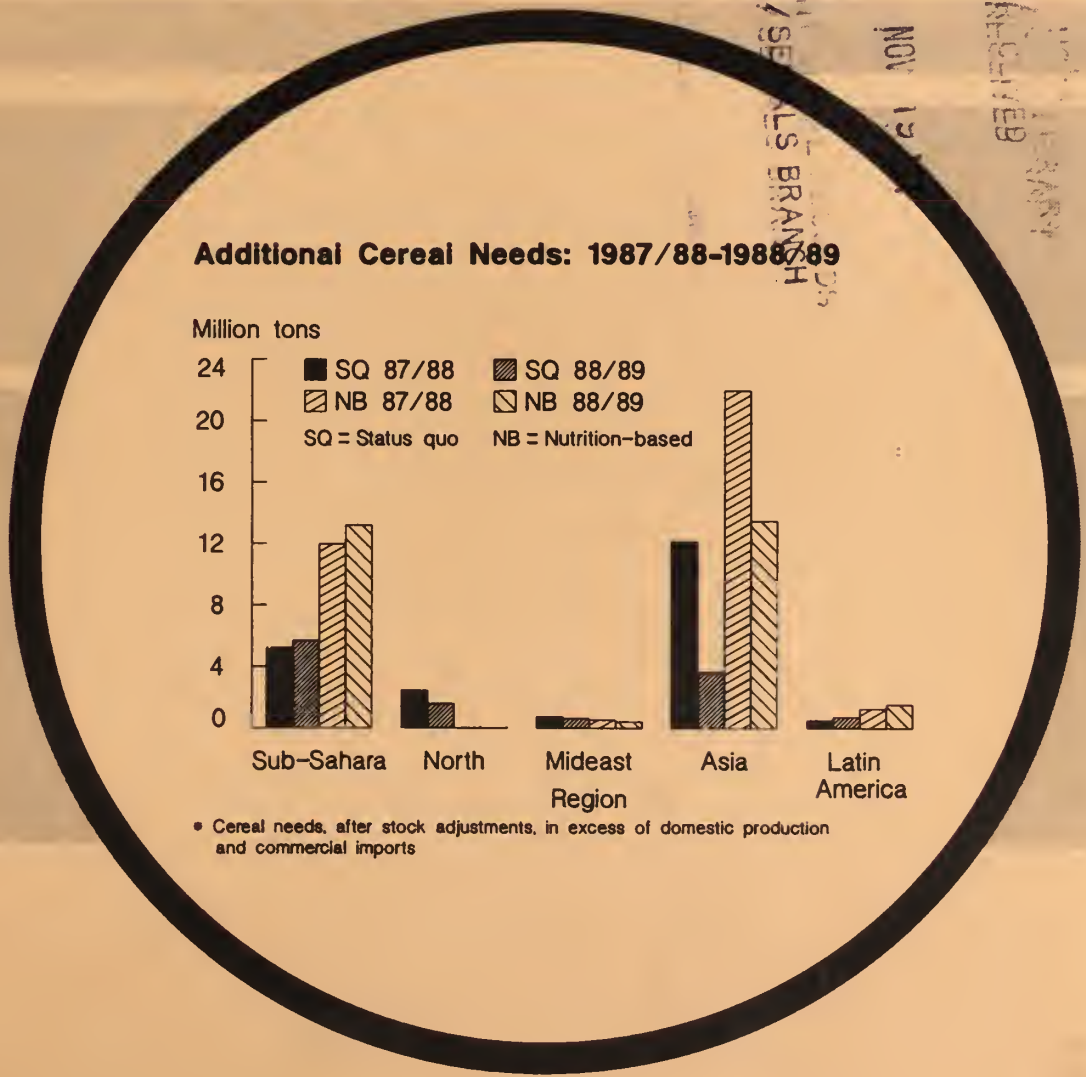
# World Food Needs and Availabilities, 1987/88: Winter Update





# PREFACE

The food need levels reported are for the marketing years 1987/88 and 1988/89. As with any projection, assumptions must be made about future events. The assessment of food needs is based heavily upon projections of food crop production and financial ability to commercially import food. Food production is subject to the vagaries of weather and commercial import capacity is influenced by various international commodity and financial market conditions. Since neither weather nor international markets can be predicted with certainty, the food needs contained in this report are subject to change.

To reflect current crop conditions and import capacity, each country is reviewed quarterly and an updated food needs calculated for those countries judged to be facing conditions significantly different from those at the last assessment. For this reason, readers are encouraged to acquire current reports to keep abreast of changing food needs. Readers are further advised that both the methodology and the data used in the calculations are continually being refined by the Interagency Food Aid Analysis Working Group. This effort reflects the continuing commitment of the U.S. Government to respond more rapidly and adequately to the needs of those countries where food commodity assistance can be used for humanitarian purposes and in the mutual interests of the recipient country and the U.S. Government.

As a result of a Presidential Initiative in the summer of 1984, an Interagency Food Aid Analysis Working Group was established to provide the U.S. Government with the best possible food needs assessment for countries in the developing world. This report is prepared under the aegis of the Interagency Working Group.

As assessment of world food needs has serious implications for both donor and recipient countries, and it has the potential to influence the expenditure of many millions of dollars and affect the lives of many millions of people. It is, therefore, very important that readers clearly understand the issues that the Food Needs and Availabilities report addresses, and those it does not. This report is not an allocation or programming document, but an objective analytical assessment of food needs. Allocation and programming decisions are made in other forums and consider factors in addition to the food needs assessed in this report.

The assessment of food needs presented herein refers to the *amount of food needed* to cover the difference between a country's domestic food production plus its commercial import capacity, and either of the following two alternative measures of food need.

The *status quo* need is based on a country's recently achieved levels of food consumption, while the *nutrition-based* need is based on FAO's published information on minimum recommended dietary intake for each country. In addition, an estimate is made of the maximum absorbable imports if the highest historical levels of per capita total food use and carryover stocks were to be maintained. This assumes the food delivery systems in most food-aid-recipient countries have been "at capacity" at the highest historical level. None of these measures, taken individually, adequately reflect the range of objectives embodied within P.L. 480 legislation, nor does any one measure capture all factors considered in allocation and programming decisions.

# WORLD FOOD NEEDS AND AVAILABILITIES, 1987/88

*WINTER UPDATE*

*FEBRUARY*

*1988*

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## ABSTRACT

This update of the *World Food Needs and Availabilities* affirms the earlier reported large increases in 1987/88 food needs, particularly in Asia and East Africa. Current improvement in Bangladesh is largely offset by increased food needs in Sri Lanka and Nepal. Cereal needs in Sub-Saharan Africa are at the 1984/85 level of 5.2 million tons, up 1.3 million tons since August. Overall status quo food needs for 1987/88, after adjustments to maintain stock levels, are 21 million tons, compared to 7.8 million in 1986/87. The projected need for 1988/89 is down to 12.3 million tons, assuming a return to normal cereal production in South Asia.

# FOREWORD

This is the second update to *World Food Needs and Availabilities*, 1987/88. Food needs assessments for 1987/88 and 1988/89 update those published in the August and November 1987 reports. The annual reports and supplements serve both the requirement of P.L. 480, as amended, that "global assessments of food production and needs" be submitted to the Congress, and the food needs analysis function of the Interagency Food Aid Analysis Working Group (IFAAWG). The IFAAWG is jointly funded by the USDA and AID through the Center of Development Information and Evaluation. Information provided through these reports to the Executive Branch and the Congress is employed along with other information in making tentative fiscal 1988 and 1989 food aid budget allocations. The main report and the supplements are also intended to provide detailed updates on food supplies and additional food needs on both a country-by-country and a world basis. This information is also useful to program and policy officials within donor governments and food-aid-recipient countries, analysts in international organizations and universities, and private agencies involved in food aid distribution.

This report presents two alternative measures of the overall food import requirements (commercial plus concessional) and the additional food needs of each country for 1987/88 and 1988/89. The *status quo* and *nutrition-based* assessments are based on two different sets of normative judgments and assumptions regarding the role of additional food and the considerations that might govern its use. The basic assumption underlying the *status quo* assessment is that additional food would be needed to prevent national food supplies, and hence total consumption, from falling below recent levels. Meeting status quo food needs would in principle stabilize national per capita use by filling shortfalls in domestic production and import capacity. The *nutrition-based* assessment addresses the continuing problem of undernourishment in many of the developing countries. The assumption is that additional food would be needed to close the gap between national food availabilities and an internationally accepted minimum nutritional standard. The nutrition-based estimates thus provide an aggregate measure of the nutritional gap, net of recipient countries' capacity to import food commercially. Calculation of zero nutrition-based food needs does not mean all citizens have a nutritionally adequate diet. In developing countries, poor nutrition is frequently the consequence of poor income distribution.

Status quo food needs assessments are stabilized by the method of estimating annual base period per capita food use. While the base moves forward annually, it does not fluctuate as sharply as would a simple average. Base period food use is calculated as the mean of the most recent 4 years that deviate less than one standard deviation from the mean of the most recent 8 years of record. The method is explained in the Methodological Notes section of this report.

The most current available weather, crop production, and financial data were employed in updating 1987/88 assessments. With new or changed crop information, production and additional food needs estimates change, sometimes sharply. The supplementary reports issued through the year provide users with assessments based on current weather and crop information. The 1988/89 assessments are based on projected agricultural production, trade and general economic trends.

Estimates of commercial import capacity assume the continuance of recent experience in debt payment, and thus the availability of foreign exchange for commercial food purchases. Significant changes in debt payment performance would alter food import capacity and additional food needs.

Neither the status quo nor the nutrition-based food needs measures deal specifically with the ability of a country's infrastructure to absorb food aid without overloading port and transportation capacity, and storage and distribution systems. The maximum absorbable food imports assessment frequently limits the quantity of nutrition-based needs that can physically be provided. The "gap" between maximum absorbable and nutrition-based food needs is one measure of the seriousness of a country's food problem. In a very real sense, the magnitude of achieving the financial and physical capacity to import food, or increasing domestic food production consistent with national food demand, is captured by this measure.

The import requirements and additional food need estimates in *World Food Needs and Availabilities* reports are based on national agricultural and economic data. These estimates assist financial and logistics planning by both donor and food aid recipient countries. It should be apparent, however, that additional food need levels are only a part of the calculus, and that delivering imported food to the communities that are deprived by national food production shortfalls or civil disturbances is a major undertaking. Factors bearing on success include local transportation and communications infrastructure, the financial status of both local and national public service agencies, and the availability of international financial support. The supplementary assessments of additional food needs issued through the year are intended to add to the information available so that food and complementary financial and technical assistance can be made available in a timely fashion.

Ray W. Nightingale
Food Needs Analysis Coordinator

## ACKNOWLEDGMENTS

Ray Nightingale directed the overall planning and preparation of the report and was assisted in coordination within the Economic Research Service by Rip Landes and Margaret Missiaen.

The Economic Research Service economists providing analysis for the report included: Chris Bolling, Richard Brown, Michael Kurtzig, Rip Landes, Margaret Missiaen, Stacey Rosen, Leslie Ross, Pat Scheid, and Mark Smith. Secretaries who helped prepare the report included Helen Joyner, Sheba Allen, and Camelia Spence.

Interagency Food Aid Analysis Working Group (IFAAWG) members contributed in food needs assessment workshops. The Agency for International Development cleared the report, with participation by Jon O'Rourke and Richard Suttor. Bruce Cogill, Jeffrey Marzilli, and Michele McNabb from the AID/Food Needs Assessment Project, also assisted in the review. Dee Linse reviewed the report for the Foreign Agricultural Service, USDA. Ross Quan reviewed the report for the Department of State.

Reviewed and approved by the World Agricultural Outlook Board.

## SUMMARY

The detailed country tables and narratives in this report include information on the quantities and dollar values of assessed additional food needs, including the need for cereals, pulses, vegetable oils, and dairy products. This summary covers just additional need for cereal, the principal commodity employed in international food aid. Food needs assessments for 1987/88 and 1988/89 are based on information available in January 1988.

*Assessed cereal needs in 1987/88*

Status quo cereal shortfalls for 1987/88 consumption requirements in 69 developing countries are estimated at 27.7 million tons, 18.8 million above the August assessment and 1.4 million above the November assessment. The estimated 1987/88 shortfall is 2.4 times the record 1984/85 level. With stock adjustments, the shortfall is estimated at 21.1 million tons. This is 12 million tons above the August assessment and 200,000 above the November assessment. The primary cause for these sustained high levels is sharply lower cereals production in Asia. However, large 1987/88 carryin stocks in India, the country with the greatest production shortfalls, will reduce the deficit. Assessed status quo needs in India are unchanged from November. Bangladesh needs are reduced 454,000, mainly from improved crop prospects. However, this reduction is more than offset by increased needs in Nepal and Sri Lanka.

In Sub-Saharan Africa, cereal shortfalls are placed at 6.7 million tons, with East Africa up 1.4 million from November. This is largely offset by stock adjustments in the Sudan, bringing the increase in Sub-Saharan needs to just over 200,000 tons. Sub-Saharan needs after stock adjustments are at the 1984/85 level of 5.2 million tons, 1.3 million over the initial August assessment. The drought in Ethiopia has increased needs to 1.6 million tons, nearly double the August assessment.

The 69 countries are estimated to be short 43 million tons of cereals to meet minimum nutritional standards in 1987/88. This is an increase of 26 million tons over 1986/87 assessed needs to meet nutrition-based consumption requirements. Nutrition-based needs have increased in Sub-Saharan Africa by 2.5 million tons since August. Stock adjustments will reduce the overall need to 35.7 million, but the maximum absorbable is assessed at 30 million tons.

*Assessed cereal needs in 1988/89*

Status quo cereal shortfalls for 1988/89 in the 69 countries remain at an estimated 10 million tons, 18 million below the current 1987/88 assessment. This assumes a full recovery of food production in South Asia. In Sub-Saharan Africa, status quo cereal needs for consumption in 1988/89 are about 4.2 million tons, 5.7 million including stock adjustments. Nutrition-based needs to meet 1988/89 consumption requirements are projected to decline 26 million, assuming recovery of food production in South Asia.

Assessed North Africa, Middle East, and Latin American status quo requirements are unchanged from August. A Food and Agriculture Organization team report received in early February indicates increased food production shortfalls in Central America. Assessments for the Central American countries will be updated in May.

*Additional cereal needs to support consumption, stocks adjustments, and maximum absorbable cereal needs*

| Region | Status quo | | Nutrition-based | | Maximum [1] |
|---|---|---|---|---|---|
| | Consumption | Consumption + stocks | Consumption | Consumption + stocks | |
| | ---------- Thousand tons (cereal equivalent) [2] ---------- | | | | |
| 1984/85 | | | | | |
| Total | 11,745 | 13,450 | 25,767 | 27,472 | [3] |
| 1985/86 | | | | | |
| Total | 8,811 | 9,503 | 20,253 | 21,036 | 15,014 |
| 1986/87 [4] | | | | | |
| Total | 6,660 | 7,851 | 17,473 | 18,105 | 15,001 |
| 1987/88 | | | | | |
| Total | 27,665 | 21,107 | 43,249 | 35,720 | 30,414 |
| Africa | 8,663 | 7,684 | 13,686 | 11,960 | 11,307 |
| North Africa | 1,981 | 2,466 | 0 | 0 | 2,466 |
| Sub-Saharan Africa | 6,682 | 5,218 | 13,686 | 11,960 | 8,841 |
| West Africa | 784 | 731 | 1,996 | 1,895 | 1,661 |
| Central Africa | 370 | 382 | 502 | 514 | 514 |
| East Africa | 3,922 | 2,988 | 7,844 | 6,893 | 4,894 |
| Southern Africa | 1,606 | 1,117 | 3,344 | 2,658 | 1,772 |
| Middle East | 686 | 743 | 481 | 538 | 743 |
| Asia | 17,817 | 12,151 | 27,924 | 21,954 | 17,268 |
| South Asia | 16,785 | 11,117 | 27,049 | 21,078 | 16,234 |
| Southeast Asia | 1,032 | 1,034 | 875 | 867 | 1,034 |
| Latin America | 499 | 529 | 1,158 | 1,268 | 1,096 |
| Caribbean | 87 | 93 | 61 | 66 | 93 |
| Central America | 220 | 244 | 469 | 517 | 457 |
| South America | 192 | 192 | 628 | 685 | 546 |
| 1988/89 | | | | | |
| Total | 9,936 | 12,308 | 25,632 | 28,645 | 19,272 |
| Africa | 5,760 | 7,286 | 11,701 | 13,194 | 10,745 |
| North Africa | 1,534 | 1,603 | 0 | 0 | 1,603 |
| Sub-Saharan Africa | 4,226 | 5,683 | 11,701 | 13,194 | 9,142 |
| West Africa | 391 | 656 | 1,615 | 1,915 | 1,568 |
| Central Africa | 371 | 380 | 506 | 515 | 515 |
| East Africa | 2,483 | 3,245 | 6,698 | 7,460 | 4,693 |
| Southern Africa | 981 | 1,401 | 2,882 | 3,304 | 2,366 |
| Middle East | 623 | 637 | 415 | 429 | 637 |
| Asia | 2,890 | 3,646 | 12,054 | 13,478 | 6,531 |
| South Asia | 1,851 | 2,310 | 11,156 | 12,538 | 5,195 |
| Southeast Asia | 1,039 | 1,336 | 898 | 940 | 1,336 |
| Latin America | 663 | 739 | 1,462 | 1,544 | 1,359 |
| Caribbean | 87 | 87 | 64 | 64 | 87 |
| Central America | 220 | 225 | 461 | 473 | 411 |
| South America | 356 | 427 | 937 | 1,007 | 861 |

1 / Imports consistent with maximum recent levels of consumption and food stocks.

2 / Major cereals, and the cereal equivalent of shortfalls in roots and tubers.

3 / Maximum absorbable needs not computed in 1984/85.

4 / Final 1986/87 assessment, May 1987 World Food Needs and Availabilities report.

## FOOD AID AVAILABILITIES AND OUTLOOK

The Food and Agriculture Organization estimates world cereal aid shipments in July 1987-June 1988 to be about 11.2 million tons, down 7 percent from 1986/87. However, this is still above the 1974 World Food Conference 10-million-ton target for cereal aid shipments. The United States is the principal donor, estimated to provide about two-thirds of the total, followed by the European Community (EC) with about 15 percent of the total, Canada with a little less than 10 percent, and Japan and Australia with about 3 percent each.

Pledges by 73 donors to the UN/FAO World Food Program's (WFP) 1987-88 biennium as of December 31, 1987 were nearly $1.06 billion against a target of $1.4 billion. This compares to pledges by 101 donors of about $1.14 billion toward the 1985-86 target of $1.35 billion.

At the end of October 1987, pledges to the WFP's International Emergency Food Reserve (IEFR) exceeded the 500,000-ton target, after only approaching it in 1986. Nearly 645,000 tons of cereals had been contributed, with more than 40 percent pledged to Afghan refugees. In addition, a variety of other commodities, such as vegetable oils, pulses, and powdered milk, were also donated.

In the United States, the October 1987-September 1988 appropriations bill passed by Congress and signed by the President included a P.L. 480 program level of about $1.48 billion, up slightly from the fiscal 1987 level. Programming of Title II reflects an increase, while that of Title I/III shows a decrease. Last fall, the Secretary of Agriculture announced that under authority of Section 416 of the Agricultural Act of 1949, as amended, 1.6 million tons of CCC grains and oilseeds will be available for fiscal 1988. This involves 1 million tons of wheat, 500,000 tons of corn, and 50,000 tons each of sorghum and soybeans. No dairy products are currently available under the program.

In Australia, the July 1987-June 1988 fiscal year budget passed last fall reflects an increase in food aid funding. The 1987-88 food aid program of A$88 million (about $62 million) is more than 10 percent above the 1986-87 level of A$82.8 million (about $55 million) when compared in terms of US dollars. Donations through the WFP, through which about half of the aid is distributed, show a significant increase from the 1986-87 level.

# ADDITIONAL FOOD NEEDS OF LOW-INCOME COUNTRIES

## Measures of Additional Food Needs--Conceptual Framework

The financial indicators noted above and the food data described below are used to generate two alternative measures of food needs in addition to estimated commercial import capacity. Countries must choose between making extraordinary commercial purchases and seeking food aid to fill this gap. However, extraordinarily large commercial imports, particularly in successive years, would be at the cost of other imports, including imports of development goods. In addition, a measure is computed of the maximum quantities of commodities which countries could feasibly import. Each measure highlights a different aspect of the food problem in the low-income countries and a different notion of the role aid might play in easing the problem. For a more detailed discussion, see the section entitled "Methodological Notes."

The first measure, termed "status quo," estimates the additional food needed to maintain per capita use of food staples at levels reported in recent years. Per capita food use is calculated as the mean of the most recent 4 years that do not deviate more than one standard deviation from the mean of the most recent 8 years. This per capita food use is called base-use in the following descriptions of tables and elsewhere in this report. The data years employed in calculations for this report are 1979/80 through 1986/87. No provision is made for improving substandard diets, for reducing allocations to countries where diets are relatively good, or for correcting problems related to the uneven distribution of food across or within countries. Because status quo estimates support a level of per capita availability that has been achieved in the past, in most cases they can be considered to be consistent with the capacity of countries to absorb food imports.

The second measure, termed "nutrition-based," estimates the additional food required to raise per capita caloric intake to the levels associated with FAO's recommended minimum diet. This measure is based on the notion that food aid might be utilized in a way consistent with nutritional need, rather than to maintain a recent, possibly substandard, status quo. In this sense, the nutrition-based measure might be viewed as a maximum level of additional food need, but not necessarily consistent with a country's ability to absorb food imports.

The measure of food import feasibility called "maximum absorbable imports" provides one basis for assessing what maximum quantity of additional food might be imported toward meeting large nutrition-based food needs, or possibly for building stocks in a period of ample world food supplies. The implicit assumption is that the food delivery systems of many of the countries involved have been fully "loaded" by past high levels of consumption. In addition, the highest level of stocks maintained over the previous 8 years is assumed, in the absence of better information, to be the largest level that can currently be maintained. The estimate is intended to provide a crude measure of the amount of food that can be physically absorbed. This level may then be used to scale back nutrition-based additional food need estimates that may be beyond the physical limits of a country's transportation, distribution, and storage capabilities.

While the status quo and nutrition-based methods differ in the estimation of requirements, they have a common structure. In each, an estimate of every country's domestic supplies of food staples is subtracted from an estimate of staple food requirements to arrive at a quantity estimate of import requirements. Import requirements are then totaled for food groups, based on assumptions regarding their substitutability. An estimate of a country's capacity to commercially import food in each category is then subtracted from the import requirement to arrive at an estimate of additional food needs. Estimated import unit values for each food group are used to generate import requirements, and additional food needs estimates in both quantity and value terms.

Several factors affecting additional food needs in a country are not addressed in these estimates. First, food distribution problems--both geographical and across income or population groups--are overlooked by the use of national level food availability and country average food requirement measures. These can mask acute shortages in specific places within a country as well as uneven distribution of food across population groups. However, measuring the unevenness of food distribution is extremely difficult, because data are not available. Acute problems of this nature are treated qualitatively in the country narratives.

Second, additional food needs are estimated without reference to a country's food and agriculture policies and current performance. Although these issues figure importantly in a country's choice between exceptional commercial food purchases and requesting concessional food imports, a comprehensive consideration of them is beyond the scope of this report.

## Introduction to Regional and Country Narrative Tables

The following section reports on the food and financial situation and outlook for 69 countries in Africa, the Middle East, Asia, and Latin America. The materials summarize events during the 1986/87 local marketing year (generally July-June) and project food and financial conditions for 1987/88 and 1988/89.

Data shown in the tables must be interpreted with caution. Forecasts of food production, population, and financial conditions for 1987/88 and 1988/89 represent ERS's forecasts of what is likely to happen during those years. But 1987/88 and 1988/89 estimates of all other items--stocks, use, import requirements, and additional needs--are not forecasts of what is likely to happen; they are estimates derived using the status quo and nutrition assumptions summarized in the previous section, and explained in detail in the "Methodological Notes" section of this report. Additional food needs calculations are also subject to a number of adjustments detailed in the Methodology section.

In each of the regional and country tables, any quantity less than 500 tons and any value less than $500,000 is shown as zero.

*Tables entitled "[Region] basic food data"*

These tables provide major cereal supply and utilization data and population for regions for 1980/81-1986/87 and for forecast years (1987/88-1988/89).

*Tables entitled "[Region] cereal use, additional food needs to support consumption, and stock adjustment"*

These tables deal only with 1987/88-1988/89 country estimates aggregated for the regions. The explanation for column headings is the same as for column headings in the country tables, as described below.

*Tables Entitled "[Country] basic food data"*

These tables provide food staple supply and utilization data for 1980/81-1986/87 and for forecast years (1987/88 and 1988/89). An explanation of each column heading follows:

1. Actual or forecast production--actual production for the individual staples for 1980/81-1986/87 and forecast production for 1987/88 and 1988/89.

2. Net imports--actual net imports during 1980/81-1986/87. Net import figures for forecast years are not supplied. Instead, estimated import requirements based on status quo and nutrition-based approaches are provided in the next set of tables.

3. Nonfeed use, 1980/81-1986/87.

4. Feed use--actual feed use, 1980/81-1985/86 and targeted feed use for 1987/88 and 1988/89. Targeted feed use is calculated to maintain per capita feed use at base-use levels. The same base-use level of feed use is employed in the status quo and nutrition-based estimates of aid needs.

5. Beginning stocks--actual stocks for 1980/81-1986/87, where reliable stocks data are available. Initial calculations of status quo and nutrition-based import and aid needs are done by maintaining the ending stocks for 1986/87 (beginning stocks 1987/88) constant throughout the forecasting period. Import requirements for building food security stocks are calculated subsequently for the countries for which stock data are available.

6. Per capita total use--actual per capita human consumption and livestock feed use for 1980/81-1986/87.

7. Commodity coverage--the food staples included for each country.

8. Share of diet--each staple's share of total daily caloric intake, and the share of total daily caloric intake covered by the food staples analyzed. Data are drawn from the 1979-81 FAO Food Balance Sheets with adjustments made in some cases for differences in FAO or ERS estimates of feed use or more recent significant changes in a staple's share of the diet.

*Tables Entitled "Import requirements for [Country]"*

These tables deal only with 1987/88 and 1988/89 estimates. An explanation of each column heading follows:

1. Forecast domestic production--data are drawn from the "basic food data" tables.

2. Total use, status quo--total amount of a staple needed to maintain per capita human consumption at the base-use level and feed use at the targeted level.

3. Total use, nutrition-based--the amount of a staple needed to support FAO recommended minimum daily per capita caloric intake levels and targeted feed use.

4. Import requirements, quantity, status quo--the imports of a staple required to maintain per capita consumption, and also to achieve the targeted levels of feed use with no change in stocks, as shown in the basic food data table. These estimates are calculated for each staple by subtracting forecast domestic production from status quo-based total use.

Subtotals for each commodity group are calculated by summing the import requirements for individual commodities. Calculated surpluses (negative import requirements) for individual commodities within groups are subtracted from deficits in other commodities because foods are assumed to be substitutable within groups. Noncereals such as roots and tubers are converted to caloric wheat equivalents before being summed. Negative subtotals are shown as zeros because these calculated surpluses are assumed not to be substitutable elsewhere in the diet.

5. Import requirements, quantity, nutrition-based--the imports of a staple required to support recommended minimum per capita caloric intake, and targeted feed use, as no change in stocks is shown in the basic food data tables. These estimates are calculated by subtracting forecast domestic production from nutrition-based total use. Totals for each commodity group by year are computed as described in (4) above.

6. Import requirements, maximum--the largest quantity that could be managed if countries wished to take the greatest advantage of low grain prices to improve stocks or to improve on the nutritional status of the population.

*Tables Entitled "Financial indicators for [Country], actual and projected"*

These tables give historical data and forecasts for four key financial indicators: year-end international reserves, merchandise exports, merchandise imports, and debt-service obligations. All data are on a calendar year basis and are compiled from a variety of sources, including the World Bank, the International Monetary Fund, Chase Econometrics, country sources, and ERS estimates.

*Tables Entitled "Additional food needs for [Country], with stock adjustment and as constrained by maximum absorbable imports"*

These tables provide calculations of cereal import requirements and food needs in excess of normal commercial imports resulting from consumption requirements and from estimates of cereal stock adjustments required for food security purposes. The estimated stock increment (quantity and value) is added to import requirements and additional food needs to support consumption to arrive at total import requirements and additional food needs. The stock increment is shown only when it results in altered total additional food needs (i.e. when not offset by negative additional food needs for consumption). For a discussion of how stock increment estimates are calculated, see "Methodological Notes".

1. Commercial import capacity--an estimate of the amount of food within each group that a country can afford to import commercially without reducing below historical levels the share of its available foreign exchange used for non-food imports. Countries are assumed in forecast years to spend the same proportion of available foreign exchange on commercial food imports as in the base period. The measure is sensitive to historical and projected levels of foreign exchange holdings, total merchandise imports and exports, and debt service. The measure is provided in both quantity and value, using the same country-specific estimates of unit import costs as in the import requirements estimate.

2. Additional food needs, quantity--the estimated quantity of additional food needed in each commodity group to support either the status quo or nutrition-based use level and targeted stock and feed use levels. Negative needs are shown as zero.

3. Additional food needs, value--the estimated value of the additional food needed in each commodity group to maintain either status quo consumption or nutrition-based consumption and targeted stock and feed use levels.

## North Africa

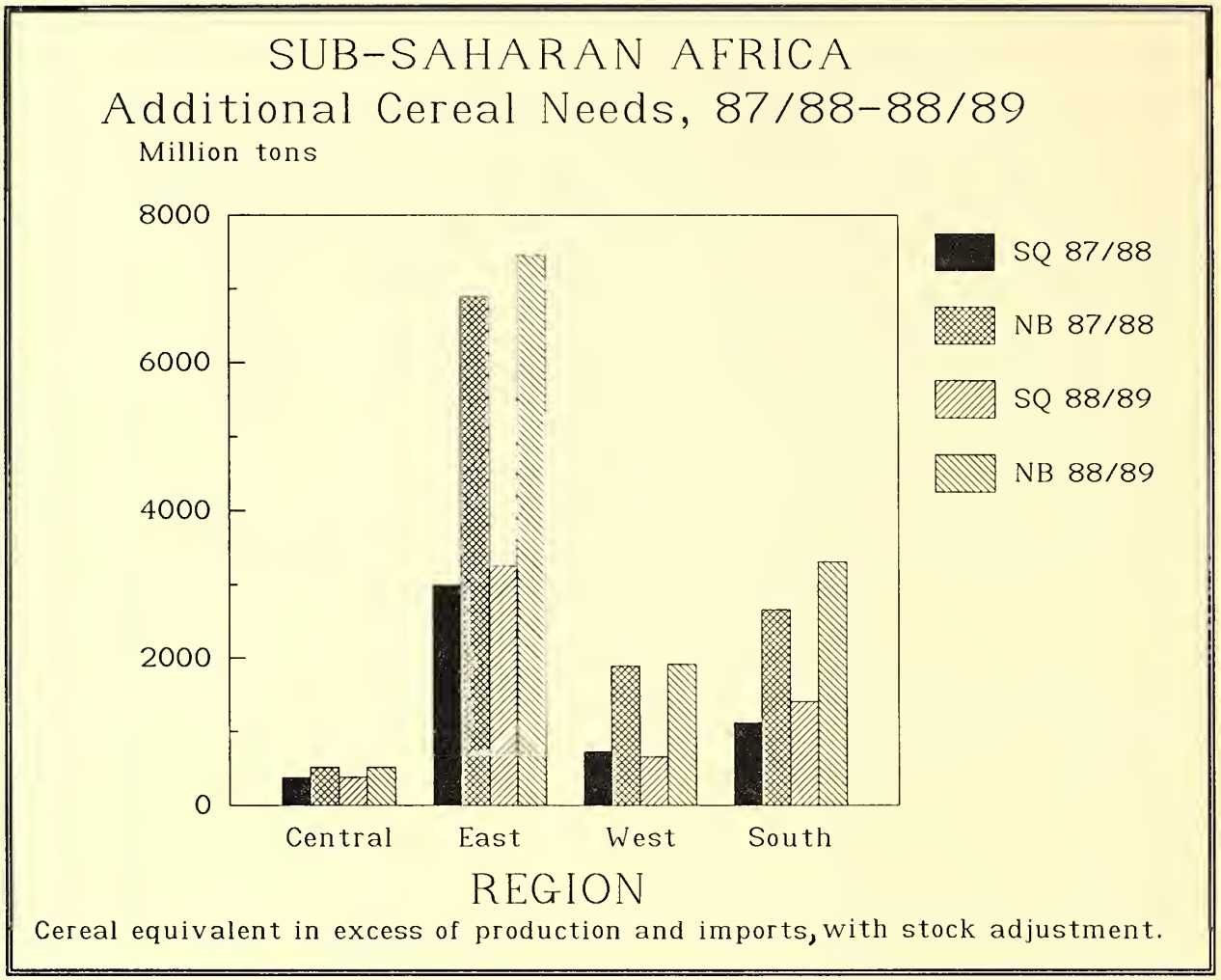
*North Africa basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 12,893 | 3,336 | 9,303 | 69,169 | 322 |
| 1981/82 | 10,679 | 3,257 | 11,091 | 71,074 | 311 |
| 1982/83 | 13,734 | 2,953 | 9,351 | 73,508 | 321 |
| 1983/84 | 12,262 | 2,435 | 11,821 | 75,502 | 319 |
| 1984/85 | 12,470 | 2,459 | 12,770 | 77,546 | 324 |
| 1985/86 | 14,481 | 2,582 | 11,810 | 79,674 | 326 |
| 1986/87 | 15,473 | 2,865 | 12,439 | 81,915 | 326 |
| 1987/88 | 14,524 | 4,065 | | 83,918 | |
| 1988/89 | 15,856 | 4,065 | | 86,078 | |

The absence of a column entry in any table means such entry is inapplicable.

*North Africa cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 26,863 | 23,626 | 1,981 | 308 | 0 | 0 |
| 1988/89 | 27,558 | 24,393 | 1,534 | 228 | 0 | 0 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 489 | 76 | 0 | 0 |
| 1988/89 | | | 69 | 10 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 2,466 | 383 | 0 | 0 |
| 1988/89 | | | 1,603 | 238 | 0 | 0 |




Cereal equivalent in excess of production and imports, with stock adjustment.

## West Africa

*West Africa basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 8,110 | 481 | 2,079 | 68,457 | 149 |
| 1981/82 | 8,719 | 451 | 2,089 | 70,086 | 152 |
| 1982/83 | 8,514 | 590 | 2,287 | 71,901 | 152 |
| 1983/84 | 8,125 | 481 | 2,604 | 74,333 | 144 |
| 1984/85 | 7,731 | 537 | 2,612 | 76,774 | 136 |
| 1985/86 | 10,363 | 448 | 2,025 | 78,962 | 152 |
| 1986/87 | 10,889 | 829 | 1,970 | 81,408 | 157 |
| 1987/88 | 10,043 | 939 | | 83,770 | |
| 1988/89 | 10,852 | 939 | | 86,145 | |

*West Africa cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | | | Status quo | | Nutrition-based | |
| | Status quo | Nutrition-based | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 17,213 | 18,915 | 784 | 130 | 1,996 | 347 |
| 1988/89 | 17,710 | 19,590 | 391 | 66 | 1,615 | 275 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (49) | (7) | (57) | (9) |
| 1988/89 | | | 281 | 41 | 300 | 44 |
| Total | | | | | | |
| 1987/88 | | | 731 | 122 | 1,895 | 330 |
| 1988/89 | | | 656 | 105 | 1,915 | 319 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 731 | 122 | 1,661 | 289 |
| 1988/89 | | | 656 | 105 | 1,568 | 262 |

## Benin

Benin's grain harvest dropped sharply in 1987 because of an erratic rainfall pattern during the growing season. Production of corn, which accounts for 80 percent of the total, was hard hit by a dry spell in April and May and excessive rains during the harvest in August and September. The heavy rains also interfered with planting of the secondary corn crop. Production of root crops, which supply more than a third of total calories, was near normal. Benin's import requirement of 169,000 tons is more than double actual imports in recent years. Part of these needs can be met by drawing down stocks, estimated at 40,000 tons, built during the good years of 1984-86.

The country's commercial import capacity is difficult to estimate because a large share of its trade is unrecorded. Benin's port is an important transit point for neighboring countries, especially Nigeria. For example, Thailand and Pakistan reported shipping 123,000 tons of rice to Benin in 1986. Since rice imports average about 30,000 tons annually, most of this rice was

probably consumed in Nigeria. The outlook for Benin's exports is favorable due to higher prices for cotton, which provided more than 30 percent of foreign exchange earnings in 1986. Benin normally imports 85-90 percent of its grain commercially.

*Benin basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 340 | 0 | 89 | 429 | 0 | 124 | Wheat | 4.1 |
| 1981/82 | 358 | 0 | 117 | 475 | 0 | 133 | Rice | 3.1 |
| 1982/83 | 347 | 0 | 86 | 433 | 0 | 118 | Corn | 22.1 |
| 1983/84 | 349 | 0 | 74 | 423 | 0 | 112 | Sorghum | 4.6 |
| 1984/85 | 472 | 0 | 52 | 489 | 0 | 126 | Millet | 0.5 |
| 1985/86 | 520 | 35 | 60 | 565 | 0 | 141 | Cassava | 21.6 |
| 1986/87 | 488 | 50 | 65 | 563 | 0 | 136 | Yams | 13.9 |
| 1987/88 | 394 | 40 | | | | | Total | 69.9 |
| 1988/89 | 502 | 40 | | | | | | |
| Roots | | | | | | | | |
| 1980/81 | 1,277 | 0 | 0 | 1,277 | 0 | 370 | | |
| 1981/82 | 1,241 | 0 | 0 | 1,241 | 0 | 349 | | |
| 1982/83 | 1,282 | 0 | 0 | 1,282 | 0 | 350 | | |
| 1983/84 | 1,200 | 0 | 0 | 1,200 | 0 | 318 | | |
| 1984/85 | 1,503 | 0 | 0 | 1,503 | 0 | 386 | | |
| 1985/86 | 1,485 | 0 | 0 | 1,485 | 0 | 370 | | |
| 1986/87 | 1,600 | 0 | 0 | 1,600 | 0 | 386 | | |
| 1987/88 | 1,575 | 0 | | | | | | |
| 1988/89 | 1,625 | 0 | | | | | | |

*Import requirements for Benin*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 394 | 556 | 543 | 162 | 149 | 230 |
| 1988/89 | 502 | 574 | 589 | 72 | 87 | 141 |
| Root | | | | | | |
| 1986/87 | 1,575 | 1,592 | 1,656 | 17 | 81 | 268 |
| 1987/88 | 1,625 | 1,643 | 1,708 | 18 | 83 | 277 |
| Cereal equivalent | | | | | | |
| 1986/87 | 1,012 | 1,181 | 1,193 | 169 | 181 | 337 |
| 1987/88 | 1,140 | 1,219 | 1,260 | 79 | 120 | 252 |

*Financial indicators for Benin, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 161 | 314 | 9 | 8 | 153 | 12 |
| 1981 | 148 | 432 | 17 | 58 | 131 | 16 |
| 1982 | 144 | 466 | 15 | 5 | 130 | 19 |
| 1983 | 128 | 302 | 24 | 4 | 103 | 14 |
| 1984 | 170 | 237 | 38 | 3 | 132 | 11 |
| 1985 | 177 | 267 | 22 | 4 | 154 | 8 |
| 1986 | 180 | 360 | 57 | 4 | 59 | |
| 1987 | 200 | 370 | 32 | 4 | 167 | 11 |
| 1988 | 200 | 375 | 32 | 4 | 167 | 11 |

*Additional food needs to support consumption for Benin, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 91 | 14 | 78 | 12 | 91 | 14 |
| 1988/89 | 95 | 14 | 0 | 0 | 26 | 4 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (20) | (3) | (20) | (3) |
| 1988/89 | | | 47 | 7 | 47 | 7 |
| Total | | | | | | |
| 1987/88 | | | 58 | 9 | 71 | 11 |
| 1988/89 | | | 31 | 4 | 73 | 11 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 58 | 9 | 71 | 11 |
| 1988/89 | | | 31 | 4 | 73 | 11 |

## Mali

The Mali assessment in this report is based on revised production data for all grains. In late 1986, the Government of Mali released data indicating that area planted had been underestimated. Both FAO and USAID/Bamako used the higher production estimates, based on government statistics, for analysis of the food situation in 1986/87 and 1987/88. FAO then incorporated this information into its data base, extending the series to earlier years. Using these numbers in the current assessment caused Mali's grain import requirements for 1987/88 to drop from more than 200,000 tons in the fall report to 89,000 tons currently. While average per capita use increased substantially, the higher production estimates were more than offsetting.

Estimates of per capita grain use in Mali vary widely depending on which years are used in calculating base period consumption and treatment of stocks. The status-quo calculation used in this report is based on an average per capita consumption of 184.5 kg. (gross grain availability for the 1981/82, 82/83, 84/85 and 85/86 crop years, see methodology chapter in the July 1987 report). The 2 years excluded from the average were years of higher use. Including those years would increase the per capita use base and import requirements for 1987/88 and 88/89. Treatment of stocks also influences the average use numbers. If carryover stocks are not built up during good production years, this will also drive up base period use. While using higher average per capita consumption would increase total use and import requirements for Mali in

1987/88, commercial imports and stock drawdown should cover most additional needs. This analysis, based on national aggregates, assumes that surpluses from southern Mali will be purchased and transported to the deficit regions in the center and north. The Government of Mali may need support for these transactions because of limited resources both for grain purchases and transportation. Also, many people in the worst deficit regions are unable to purchase adequate amounts of grain when it is available in the market.

*Mali basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 842 | 75 | 98 | 1,015 | 0 | 147 | Wheat | 1.6 |
| 1981/82 | 1,102 | 0 | 145 | 1,197 | 0 | 169 | Rice | 11.1 |
| 1982/83 | 1,249 | 50 | 178 | 1,407 | 0 | 194 | Corn | 4.6 |
| 1983/84 | 1,386 | 70 | 284 | 1,560 | 0 | 211 | Millet | |
| 1984/85 | 1,052 | 180 | 283 | 1,425 | 0 | 188 | and | |
| 1985/86 | 1,315 | 90 | 119 | 1,439 | 0 | 186 | Sorghum | 53.0 |
| 1986/87 | 1,650 | 85 | 85 | 1,665 | 0 | 211 | Total | 70.4 |
| 1987/88 | 1,403 | 155 | | | | | | |
| 1988/89 | 1,457 | 155 | | | | | | |

*Import requirements for Mali*

| Commodity/year | Production | Total use: Status quo | Total use: Nutrition-based | Import requirements: Status quo | Import requirements: Nutrition-based | Import requirements: Maximum absorbable |
|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 1,403 | 1,492 | 1,744 | 89 | 341 | 325 |
| 1988/89 | 1,457 | 1,526 | 1,789 | 69 | 332 | 311 |

*Financial indicators for Mali, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available: Total | Foreign exchange available: Share to major food imports |
|---|---|---|---|---|---|---|
| | Million dollars | | | | | Percent |
| 1980 | 205 | 308 | 10 | 15 | 195 | 21 |
| 1981 | 154 | 269 | 10 | 17 | 145 | 22 |
| 1982 | 146 | 233 | 9 | 17 | 137 | 30 |
| 1983 | 167 | 241 | 14 | 16 | 152 | 31 |
| 1984 | 192 | 258 | 20 | 27 | 172 | 30 |
| 1985 | 181 | 293 | 38 | 23 | 143 | 9 |
| 1986 | 192 | 307 | 35 | 23 | 131 | |
| 1987 | 180 | 310 | 21 | 13 | 147 | 24 |
| 1988 | 190 | 310 | 22 | 13 | 156 | 24 |

*Additional food needs to support consumption for Mali, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 161 | 32 | 0 | 0 | 180 | 35 |
| 1988/89 | 179 | 33 | 0 | 0 | 153 | 29 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 0 | 0 | (16) | (3) |
| 1988/89 | | | 0 | 0 | 3 | 1 |
| Total | | | | | | |
| 1987/88 | | | 0 | 0 | 164 | 32 |
| 1988/89 | | | 0 | 0 | 156 | 29 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 0 | 0 | 148 | 29 |
| 1988/89 | | | 0 | 0 | 135 | 25 |

Cereal equivalent consumption needs and stock adjustments do not add to the total because negative additional food needs are shown as zero.

## Mauritania

Grain production estimates for Mauritania have been revised substantially since the July report. Rainfall was near normal for the second consecutive year, leading to another good harvest, more than 3 times the average of 1981-85. Much of the increase came in rice production, which more than tripled during the last 3 years. Low rainfall over the upper reaches of the Senegal River kept the river from flooding near the delta, thereby reducing flood recession crops in that area.

Mauritania's import requirements remain high because of the large share of consumption supplied by imported grain. Updates of the country's financial indicators caused a marginal increase in commercial import capacity.

*Mauritania basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Commodity coverage | Share of diet |
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 46 | 0 | 156 | 202 | 0 | 134 | Wheat | 16.0 |
| 1981/82 | 77 | 0 | 175 | 252 | 0 | 165 | Rice | 14.1 |
| 1982/83 | 18 | 0 | 278 | 296 | 0 | 190 | Corn | 1.2 |
| 1983/84 | 28 | 0 | 295 | 323 | 0 | 203 | Millet | 17.0 |
| 1984/85 | 16 | 0 | 258 | 274 | 0 | 169 | Total | 48.2 |
| 1985/86 | 52 | 0 | 169 | 221 | 0 | 133 | | |
| 1986/87 | 134 | 0 | 160 | 294 | 0 | 174 | | |
| 1987/88 | 126 | 0 | | | | | | |
| 1988/89 | 104 | 0 | | | | | | |

*Import requirements for Mauritania*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 126 | 292 | 279 | 166 | 153 | 224 |
| 1988/89 | 104 | 298 | 283 | 194 | 179 | 254 |

*Financial indicators for Mauritania, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 196 | 321 | 30 | 140 | 166 | 18 |
| 1981 | 270 | 386 | 54 | 162 | 216 | 19 |
| 1982 | 240 | 427 | 40 | 139 | 200 | 33 |
| 1983 | 315 | 378 | 37 | 106 | 278 | 15 |
| 1984 | 294 | 302 | 42 | 78 | 252 | 16 |
| 1985 | 372 | 334 | 78 | 55 | 293 | 14 |
| 1986 | 427 | 328 | 77 | 45 | 229 | |
| 1987 | 430 | 337 | 69 | 40 | 330 | 15 |
| 1988 | 425 | 340 | 68 | 40 | 325 | 15 |

*Additional food needs to support consumption for Mauritania, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 141 | 22 | 25 | 4 | 12 | 2 |
| 1988/89 | 145 | 22 | 49 | 7 | 34 | 5 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 25 | 4 | 12 | 2 |
| 1988/89 | | | 49 | 7 | 34 | 5 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 25 | 4 | 12 | 2 |
| 1988/89 | | | 49 | 7 | 34 | 5 |

## Central Africa

*Central Africa basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --- 1,000 tons --- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 1,232 | 59 | 766 | 37,842 | 53 |
| 1981/82 | 1,241 | 60 | 690 | 38,818 | 50 |
| 1982/83 | 1,258 | 58 | 715 | 40,044 | 49 |
| 1983/84 | 1,302 | 51 | 734 | 41,071 | 50 |
| 1984/85 | 1,343 | 17 | 766 | 42,091 | 50 |
| 1985/86 | 1,363 | 33 | 836 | 43,265 | 51 |
| 1986/87 | 1,387 | 40 | 848 | 44,453 | 50 |
| 1987/88 | 1,360 | 40 | | 45,689 | |
| 1988/89 | 1,455 | 40 | | 46,966 | |

*Central Africa cereal use and additional food needs*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 8,995 | 9,090 | 370 | 62 | 502 | 83 |
| 1988/89 | 9,247 | 9,344 | 371 | 59 | 506 | 80 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 12 | 2 | 12 | 2 |
| 1988/89 | | | 9 | 2 | 9 | 2 |
| Total | | | | | | |
| 1987/88 | | | 382 | 64 | 514 | 85 |
| 1988/89 | | | 380 | 61 | 515 | 82 |

## East Africa

East Africa Basic Food Data

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 15,306 | 1,077 | 1,798 | 121,603 | 141 |
| 1981/82 | 16,831 | 1,017 | 1,659 | 125,707 | 143 |
| 1982/83 | 16,899 | 1,512 | 1,251 | 129,771 | 140 |
| 1983/84 | 15,671 | 1,460 | 1,838 | 133,559 | 135 |
| 1984/85 | 13,201 | 992 | 4,170 | 136,749 | 124 |
| 1985/86 | 18,718 | 1,405 | 2,291 | 142,212 | 140 |
| 1986/87 | 19,137 | 2,550 | 1,112 | 146,683 | 136 |
| 1987/88 | 16,280 | 2,817 | | 151,469 | |
| 1988/89 | 18,326 | 2,817 | | 156,417 | |

*East Africa cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 27,445 | 31,597 | 3,922 | 567 | 7,844 | 1,228 |
| 1988/89 | 28,355 | 32,622 | 2,483 | 356 | 6,698 | 1,031 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (934) | (123) | (951) | (125) |
| 1988/89 | | | 762 | 107 | 762 | 107 |
| Total | | | | | | |
| 1987/88 | | | 2,988 | 444 | 6,893 | 1,103 |
| 1988/89 | | | 3,245 | 462 | 7,460 | 1,138 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 2,988 | 444 | 4,894 | 774 |
| 1988/89 | | | 3,245 | 462 | 4,693 | 717 |

## Ethiopia

Ethiopia's cereal production in 1987/88 is estimated at 5 million tons, 13 percent below last years' good harvest, but higher than the 1984/85 drought year. However, shortfalls in some regions (Eritrea and Tigray) are greater than those experienced during the last drought. In Eritrea, the crop loss is estimated at 80 percent. Other regions affected by the drought include Hararghe, Wello, northeastern Shoa, and eastern Gondar. In the remaining areas of the country, output was close to normal.

Status quo import requirements are estimated to be 1.8 million tons for 1987/88. Commercial import capacity, with 16 percent of foreign exchange allocated to food imports, is 179,000 tons. Including a small increase in stocks, additional food needs are 1.62 million tons. It can be assumed that some of the 500,000 tons of stocks (from the beginning of 1987/88) will be drawn down to help meet these needs. Therefore, it is likely that additional needs will be closer to 1.4 million tons. As of December, 1987, only about 500,000 tons of these needs has been covered by pledges; these are expected to meet requirements until March.

Since the fall update, stock levels have been changed. Previously, recent years' stocks were underestimated in that they included only government holdings. An estimate of on-farm stocks was determined by observing stock data prior to the large inflows of food aid. These on-farm estimates were then added to recent years' stock levels in order to approximate total in-country stocks. As a result, stock levels from 1984/85 and onward have risen.

*Ethiopia basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Commodity coverage | Share of diet |
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 5,559 | 695 | 226 | 5,847 | 213 | 155 | Wheat | 9.1 |
| 1981/82 | 5,324 | 420 | 303 | 5,745 | 172 | 147 | Corn | 15.3 |
| 1982/83 | 6,649 | 130 | 323 | 6,587 | 160 | 163 | Barley | 9.6 |
| 1983/84 | 5,749 | 355 | 531 | 6,043 | 187 | 148 | Sorghum | 15.9 |
| 1984/85 | 4,450 | 405 | 970 | 5,021 | 176 | 123 | Millet | 2.0 |
| 1985/86 | 5,245 | 628 | 1,075 | 6,056 | 122 | 141 | Teff | 15.5 |
| 1986/87 | 5,750 | 770 | 740 | 6,594 | 172 | 150 | Total | 67.6 |
| 1987/88 | 5,000 | 494 | | | | | | |
| 1988/89 | 5,445 | 494 | | | | | | |

*Import requirements for Ethiopia*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 5,000 | 6,794 | 8,884 | 1,794 | 3,884 | 2,911 |
| 1988/89 | 5,445 | 6,990 | 9,168 | 1,545 | 3,723 | 2,687 |

*Financial indicators for Ethiopia, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 419 | 722 | 34 | 75 | 385 | 10 |
| 1981 | 374 | 739 | 43 | 246 | 331 | 10 |
| 1982 | 403 | 787 | 55 | 178 | 348 | 7 |
| 1983 | 403 | 876 | 68 | 119 | 335 | 9 |
| 1984 | 417 | 928 | 84 | 41 | 333 | 12 |
| 1985 | 333 | 993 | 105 | 148 | 228 | 28 |
| 1986 | 400 | 1,160 | 176 | 251 | 229 | |
| 1987 | 450 | 1,200 | 92 | 251 | 439 | 16 |
| 1988 | 450 | 1,200 | 92 | 251 | 439 | 16 |

*Additional food needs to support consumption for Ethiopia, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 179 | 26 | 1,614 | 238 | 3,704 | 546 |
| 1988/89 | 188 | 26 | 1,358 | 191 | 3,535 | 498 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 2 | 0 | 2 | 0 |
| 1988/89 | | | 715 | 101 | 715 | 101 |
| Total | | | | | | |
| 1987/88 | | | 1,616 | 238 | 3,706 | 546 |
| 1988/89 | | | 2,073 | 292 | 4,251 | 599 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 1,616 | 238 | 2,734 | 403 |
| 1988/89 | | | 2,073 | 292 | 2,687 | 379 |

## Sudan

The 1987/88 sorghum crop is estimated at 1.6 million tons, about half the previous year's output. The primary reason for this decline in production was the 30 percent reduction in area planted, resulting from low producer prices. Another significant factor was dry weather in August and September, which lowered yields. These poor weather conditions had an impact on the millet crop as well--lowering production almost 50 percent from the 1986/87 crop to an estimated 150,000 tons.

Because of the production shortfalls, estimates of status quo import requirements have risen since the last report to 1.84 million tons. With commercial import capacity of 137,000 tons and a stock drawdown of more than 1 million tons, estimated additional food needs are 678,000 tons. The sorghum shortfall should be covered by the stock drawdown, but it will take an unprecedented effort to move the food from surplus to deficit areas. The wheat import requirement is 658,000 tons. This is very close to the import levels of the last 2 years, which were almost entirely concessional. Therefore, it should be expected that this requirement will be fulfilled by donor commitments. The millet deficit could prove to be a problem, however, because stocks of sorghum, which could be consumed as a substitute, may not be available.

*Sudan basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 2,816 | 190 | 146 | 2,708 | 210 | 153 | Wheat | 7.9 |
| 1981/82 | 3,981 | 234 | 175 | 3,402 | 318 | 189 | Rice | 0.3 |
| 1982/83 | 2,453 | 670 | 182 | 2,810 | 198 | 148 | Corn | 0.8 |
| 1983/84 | 2,327 | 297 | 451 | 2,788 | 197 | 142 | Sorghum | 33.2 |
| 1984/85 | 1,382 | 90 | 1,595 | 2,802 | 90 | 134 | Millet | 9.5 |
| 1985/86 | 4,170 | 175 | 560 | 3,813 | 217 | 176 | Peanuts | 11.9 |
| 1986/87 | 3,761 | 875 | (6) | 3,162 | 258 | 145 | Total | 63.7 |
| 1987/88 | 1,962 | 1,210 | | | | | | |
| 1988/89 | 3,522 | 1,210 | | | | | | |
| Peanuts | | | | | | | | |
| 1980/81 | 707 | 50 | (41) | 706 | 0 | 37 | | |
| 1981/82 | 838 | 10 | (100) | 698 | 0 | 35 | | |
| 1982/83 | 492 | 50 | (70) | 442 | 0 | 22 | | |
| 1983/84 | 413 | 30 | (45) | 388 | 0 | 18 | | |
| 1984/85 | 386 | 10 | 0 | 386 | 0 | 18 | | |
| 1985/86 | 274 | 10 | 0 | 274 | 0 | 12 | | |
| 1986/87 | 399 | 10 | 0 | 399 | 0 | 17 | | |
| 1987/88 | 330 | 10 | | | | | | |
| 1988/89 | 375 | 10 | | | | | | |

*Import requirements for Sudan*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 1,962 | 3,708 | 3,902 | 1,746 | 1,940 | 2,629 |
| 1988/89 | 3,522 | 3,820 | 4,194 | 298 | 672 | 1,207 |
| Peanuts | | | | | | |
| 1987/88 | 330 | 419 | 552 | 89 | 222 | 749 |
| 1988/89 | 375 | 432 | 589 | 57 | 214 | 735 |
| Cereal equivalent | | | | | | |
| 1987/88 | 2,292 | 4,128 | 4,454 | 1,836 | 2,162 | 2,141 |
| 1988/89 | 3,897 | 4,252 | 4,783 | 355 | 886 | 700 |

*Financial indicators for Sudan, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available Total | Foreign exchange available Share to major food imports |
|---|---|---|---|---|---|---|
| | Million dollars | | | | | Percent |
| 1980 | 689 | 1,127 | 104 | 49 | 585 | 1 |
| 1981 | 793 | 1,634 | 145 | 17 | 648 | 13 |
| 1982 | 401 | 750 | 115 | 21 | 286 | 32 |
| 1983 | 514 | 703 | 87 | 17 | 427 | 20 |
| 1984 | 519 | 600 | 107 | 17 | 412 | 17 |
| 1985 | 444 | 579 | 130 | 12 | 314 | 17 |
| 1986 | 327 | 634 | 55 | 20 | (572) | |
| 1987 | 500 | 700 | 119 | 20 | 382 | 18 |
| 1988 | 425 | 700 | 101 | 20 | 325 | 18 |

*Additional food needs to support consumption for Sudan, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 137 | 18 | 1,698 | 224 | 2,025 | 267 |
| 1988/89 | 122 | 15 | 233 | 29 | 764 | 96 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (1,020) | (135) | (1,020) | (135) |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 678 | 90 | 1,005 | 133 |
| 1988/89 | | | 233 | 29 | 764 | 96 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 678 | 90 | 984 | 130 |
| 1988/89 | | | 233 | 29 | 577 | 73 |

## Southern Africa

*Southern Africa basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 6,273 | 302 | 1,598 | 44,064 | 178 |
| 1981/82 | 7,853 | 317 | 1,249 | 45,326 | 178 |
| 1982/83 | 6,590 | 1,369 | 904 | 46,650 | 160 |
| 1983/84 | 5,562 | 1,381 | 1,108 | 48,082 | 158 |
| 1984/85 | 6,173 | 447 | 1,673 | 49,432 | 153 |
| 1985/86 | 8,265 | 729 | 1,099 | 50,876 | 159 |
| 1986/87 | 7,671 | 1,989 | 1,027 | 52,430 | 155 |
| 1987/88 | 5,835 | 2,538 | | 54,045 | |
| 1988/89 | 6,671 | 2,538 | | 55,721 | |

*Southern Africa cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | | | Status quo | | Nutrition-based | |
| | Status quo | Nutrition-based | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 9,924 | 11,585 | 1,606 | 218 | 3,344 | 455 |
| 1988/89 | 10,236 | 12,058 | 981 | 130 | 2,882 | 377 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (957) | (119) | (957) | (119) |
| 1988/89 | | | 421 | 52 | 421 | 52 |
| Total | | | | | | |
| 1987/88 | | | 1,117 | 159 | 2,658 | 371 |
| 1988/89 | | | 1,402 | 182 | 3,304 | 430 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 1,117 | 159 | 1,772 | 245 |
| 1988/89 | | | 1,402 | 182 | 2,366 | 303 |

On regional tables, cereal equivalent consumption needs plus stock adjustments do not necessarily add to the total.

## Malawi

Continued drought and mealy bug infestation has reduced estimated corn production by 90,000 tons for 1987/88. Increased demand for imports, and increased costs resulting from refugees fleeing the civil war in Mozambique, have significantly increased merchandise imports expenditures. The revised merchandise import costs for 1984, 1985, and 1986 have reduced estimated capacity to commercially import cereals.

The effect of the production and financial changes has increased assessed 1987/88 additional food needs from 168,000 tons to 264,000 tons of cereal equivalent. Similar increases in nutrition-based needs have also been calculated for the 1987/88 year. The assessment for 1988/89 is reduced on the assumption that timely rainfall continues in Malawi during the next few months.

*Malawi basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Commodity coverage | Share of diet |
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 1,165 | 0 | 86 | 1,211 | 40 | 208 | Wheat | 0.9 |
| 1981/82 | 1,245 | 0 | 50 | 1,245 | 50 | 209 | Corn | 64.4 |
| 1982/83 | 1,415 | 0 | (5) | 1,190 | 60 | 195 | Total | 65.3 |
| 1983/84 | 1,370 | 160 | (46) | 1,254 | 50 | 197 | | |
| 1984/85 | 1,401 | 180 | (99) | 1,260 | 52 | 192 | | |
| 1985/86 | 1,356 | 170 | (30) | 1,294 | 52 | 191 | | |
| 1986/87 | 1,295 | 150 | 47 | 1,365 | 52 | 194 | | |
| 1987/88 | 1,226 | 75 | | | | | | |
| 1988/89 | 1,391 | 75 | | | | | | |

*Import requirements for Malawi*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 1,226 | 1,469 | 1,585 | 243 | 359 | 451 |
| 1988/89 | 1,391 | 1,519 | 1,653 | 128 | 262 | 340 |

*Financial indicators for Malawi, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 284 | 318 | 68 | 68 | 217 | 10 |
| 1981 | 288 | 258 | 89 | 49 | 199 | 11 |
| 1982 | 242 | 214 | 62 | 23 | 180 | 7 |
| 1983 | 230 | 198 | 59 | 15 | 171 | 8 |
| 1984 | 316 | 263 | 82 | 57 | 234 | 5 |
| 1985 | 258 | 291 | 76 | 45 | 182 | 6 |
| 1986 | 250 | 260 | 108 | 25 | 165 | |
| 1987 | 230 | 270 | 61 | 24 | 155 | 6 |
| 1988 | 230 | 250 | 61 | 26 | 160 | 6 |

*Additional food needs to support consumption for Malawi, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 24 | 4 | 219 | 35 | 336 | 53 |
| 1988/89 | 25 | 4 | 103 | 15 | 237 | 36 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 44 | 7 | 44 | 7 |
| 1988/89 | | | 33 | 5 | 33 | 5 |
| Total | | | | | | |
| 1987/88 | | | 264 | 42 | 380 | 60 |
| 1988/89 | | | 135 | 20 | 270 | 41 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 264 | 42 | 380 | 60 |
| 1988/89 | | | 135 | 20 | 270 | 41 |

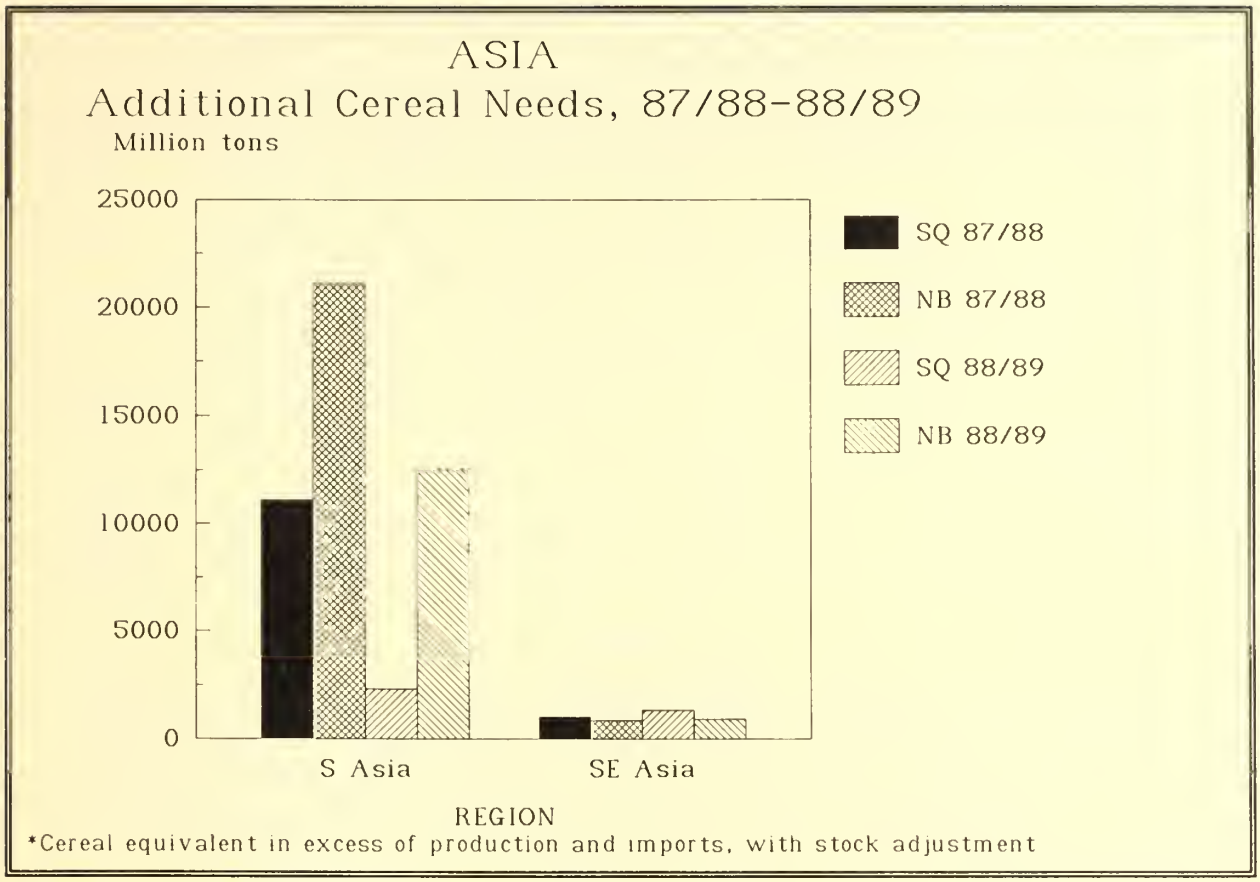
## The Middle East

*Middle East basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 956 | 254 | 1,105 | 9,964 | 215 |
| 1981/82 | 945 | 170 | 1,323 | 10,135 | 223 |
| 1982/83 | 880 | 173 | 1,430 | 10,316 | 221 |
| 1983/84 | 488 | 203 | 1,447 | 10,514 | 192 |
| 1984/85 | 524 | 116 | 1,652 | 10,737 | 201 |
| 1985/86 | 733 | 131 | 1,710 | 11,001 | 222 |
| 1986/87 | 755 | 132 | 1,775 | 11,225 | 225 |
| 1987/88 | 769 | 132 | | 11,225 | |
| 1988/89 | 791 | 132 | | 11,454 | |

*Middle East cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 2,475 | 2,269 | 686 | 100 | 481 | 69 |
| 1988/89 | 2,524 | 2,316 | 623 | 86 | 415 | 56 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 57 | 9 | 57 | 9 |
| 1988/89 | | | 14 | 2 | 14 | 2 |
| Total | | | | | | |
| 1987/88 | | | 743 | 109 | 538 | 78 |
| 1988/89 | | | 637 | 88 | 429 | 59 |




## South Asia

*South Asia basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 151,832 | 20,032 | 399 | 906,091 | 170 |
| 1981/82 | 159,741 | 17,926 | 3,158 | 926,031 | 174 |
| 1982/83 | 151,408 | 19,822 | 5,788 | 947,382 | 164 |
| 1983/84 | 178,296 | 21,280 | 5,050 | 969,559 | 182 |
| 1984/85 | 175,437 | 28,642 | 3,423 | 991,723 | 175 |
| 1985/86 | 175,052 | 33,551 | 2,194 | 1,013,376 | 176 |
| 1986/87 | 178,354 | 32,912 | 1,525 | 1,035,542 | 177 |
| 1987/88 | 157,805 | 28,987 | | 1,058,007 | |
| 1988/89 | 183,930 | 28,987 | | 1,080,714 | |

*South Asia cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 184,955 | 196,628 | 16,785 | 2,929 | 27,049 | 4,711 |
| 1988/89 | 189,244 | 203,690 | 1,851 | 281 | 11,156 | 1,826 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (5,667) | (1,012) | (5,667) | (1,012) |
| 1988/89 | | | 459 | 61 | 1,413 | 224 |
| Total | | | | | | |
| 1987/88 | | | 11,117 | 1,918 | 21,078 | 3,653 |
| 1988/89 | | | 2,310 | 343 | 12,538 | 2,046 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 11,117 | 1,918 | 16,234 | 2,818 |
| 1988/89 | | | 2,310 | 343 | 5,195 | 822 |

## Bangladesh

Estimated total cereal production during 1987/88 has been increased 3 percent from the previous estimate to 16.2 million tons, because of improved prospects for the fall and spring rice crops. Flood damage to the fall rice crop was apparently less severe than initially forecast, while higher prices and normal weather are expected to stimulate spring plantings. Rice production is now projected at 14.8 million tons, up 470,000 tons from earlier estimates yet 4 percent below the 1986/87 crop. The wheat and vegetable oil production estimates are unchanged at 1.4 million and 61,000 tons, respectively.

Higher estimated production has lowered 1987/88 status quo cereal import requirements 13 percent to 3.1 million tons. This estimate, however, is substantially above last year's actual cereal imports of about 1.8 million tons, comprised of 1.5 million tons of wheat and nearly 300,000 tons of rice. To meet the FAO/WHO recommended minimum level of caloric intake, import requirements are estimated at 6.2 million tons, down 6 percent from earlier estimates but still reflecting a substantial nutritional gap. This assessment, however, is dependent on the projected outcome of the spring 1988 wheat and rice crops.

The financial data, calculated on Bangladesh's fiscal year (July/June), has been adjusted to more closely match the US fiscal year (October/September). As a result, the commercial import capacity in 1987/88 is now estimated at $129 million (843,000 tons), 3 percent below the previous estimate. The balance-of-payments position remains very weak, despite recent progress in keeping the budget and current account deficits to more sustainable levels. The expected slowdown in the economy, the heavy debt burden, and rising expenditures on flood relief goods and public distribution of subsidized wheat and rice are likely to strain the country's limited resources.

Status quo additional cereal needs are now estimated at 2.2 million tons, including 197,000 tons to rebuild stocks towards the informal food security target of 1.3 million tons. Maximum absorbable nutrition-based additional needs are estimated at about 5.2 million tons of cereals. Status quo and nutrition-based additional edible oil needs through 1988/89 continue to be estimated at zero, primarily because lower world prices will allow adequate amounts to be purchased commercially.

Assuming average weather, 1988/89 larger wheat and rice harvests are projected to raise total cereal production nearly 7 percent to 17.3 million tons. Because of revised financial data, commercial import capacity is projected to increase by $15 million to $144 million. As a result, both status quo and nutrition-based additional cereal needs are projected to decline further than previously estimated. In 1988/89, status quo additional cereal needs are currently projected at 1.2 million tons, while 4.4 million tons of cereals would be needed to close the nutrition gap. This projection includes stockbuilding of 131,000 tons against future production shortfalls.

*Bangladesh basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 14,975 | 787 | 1,077 | 15,587 | 0 | 177 | Wheat | 8.8 |
| 1981/82 | 14,598 | 1,252 | 1,235 | 16,470 | 0 | 182 | Rice | 76.3 |
| 1982/83 | 15,311 | 615 | 1,817 | 17,117 | 0 | 183 | Vegetable oils | 2.2 |
| 1983/84 | 15,710 | 626 | 2,056 | 17,592 | 0 | 183 | Total | 87.3 |
| 1984/85 | 16,084 | 800 | 2,588 | 18,455 | 0 | 188 | | |
| 1985/86 | 16,082 | 1,017 | 1,203 | 17,326 | 0 | 172 | | |
| 1986/87 | 16,497 | 976 | 1,800 | 18,564 | 0 | 180 | | |
| 1987/88 | 16,150 | 709 | | | | | | |
| 1988/89 | 17,250 | 709 | | | | | | |
| Vegetable oils | | | | | | | | |
| 1980/81 | 56 | 18 | 125 | 146 | 0 | 2 | | |
| 1981/82 | 54 | 53 | 133 | 189 | 0 | 2 | | |
| 1982/83 | 55 | 51 | 116 | 159 | 0 | 2 | | |
| 1983/84 | 57 | 63 | 133 | 174 | 0 | 2 | | |
| 1984/85 | 57 | 79 | 207 | 210 | 0 | 2 | | |
| 1985/86 | 56 | 133 | 295 | 337 | 0 | 3 | | |
| 1986/87 | 57 | 147 | 285 | 350 | 0 | 3 | | |
| 1987/88 | 61 | 139 | | | | | | |
| 1988/89 | 65 | 139 | | | | | | |

*Import requirements for Bangladesh*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 16,150 | 19,293 | 22,325 | 3,143 | 6,175 | 4,294 |
| 1988/89 | 17,250 | 19,766 | 22,964 | 2,516 | 5,714 | 3,682 |
| Vegetable oils | | | | | | |
| 1987/88 | 61 | 205 | 210 | 144 | 149 | 306 |
| 1988/89 | 65 | 210 | 215 | 145 | 150 | 311 |

*Financial indicators for Bangladesh, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 1,187 | 2,622 | 249 | 938 | 274 | 28 |
| 1981 | 1,364 | 2,795 | 269 | 1,095 | 249 | 11 |
| 1982 | 1,298 | 2,818 | 214 | 1,084 | 122 | 19 |
| 1983 | 1,545 | 2,589 | 263 | 1,282 | 358 | 17 |
| 1984 | 1,717 | 2,665 | 280 | 1,437 | 539 | 30 |
| 1985 | 1,697 | 3,011 | 414 | 1,283 | 395 | 13 |
| 1986 | 1,666 | 2,734 | 470 | 1,196 | 460 | |
| 1987 | 1,860 | 2,980 | 565 | 1,370 | 550 | 20 |
| 1988 | 1,955 | 3,440 | 475 | 1,532 | 600 | 20 |

*Additional food needs to support consumption for Bangladesh, with stock adjustment and as constrained by maximum absorbable imports*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 843 | 129 | 1,964 | 300 | 5,006 | 766 |
| 1988/89 | 985 | 144 | 1,103 | 161 | 4,312 | 631 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 197 | 30 | 197 | 30 |
| 1988/89 | | | 131 | 19 | 131 | 19 |
| Total | | | | | | |
| 1987/88 | | | 2,161 | 331 | 5,203 | 796 |
| 1988/89 | | | 1,234 | 181 | 4,443 | 650 |
| Vegetable oils | | | | | | |
| 1987/88 | 302 | 98 | 0 | 0 | 0 | 0 |
| 1988/89 | 337 | 110 | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | 227 | | 331 | | 796 |
| 1988/89 | | 254 | | 181 | | 650 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 2,161 | 331 | 3,370 | 516 |
| 1988/89 | | | 1,234 | 181 | 2,459 | 360 |
| Vegetable oils | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | | 331 | | 516 |
| 1988/89 | | | | 181 | | 360 |

Commercial import capacity surplus to vegetable oil import requirements offsets some additional cereal needs.

## Nepal

Total cereal production in 1987/88 is currently estimated at 3.0 million tons, 29 percent less than earlier forecasts and slightly below the drought-reduced harvests of 1986/87. The decline stems largely from rice losses from drought, followed by heavy downpours, in the central and eastern parts of the country. Rice production is now estimated at 1.6 million tons, revised downward 53 percent.

Because of the drop in domestic cereal production, the estimated status quo cereal import requirement has risen from zero to 327,000 tons in 1987/88. Similarly, the nutrition-based estimate has nearly tripled, increasing to 848,000 tons from 300,000.

There have been no revisions in Nepal's financial situation, which remains extremely weak. The commercial import capacity continues to be estimated at $7 million (28,000 tons), leaving 1987/88 status quo and nutrition-based additional cereal needs of 299,000 tons and 821,000 tons, respectively. According to some observers, it is unlikely these needs can be met because logistical and administrative problems would limit imports to about 200,000 tons.

Assuming average weather in 1988/89, a rebound in overall cereal production is projected. Status quo import requirements are forecast to fall to 131,000 tons, with about 697,000 tons needed to raise consumption to the FAO/WHO recommended minimum diet. Compared with 1987/88, additional cereal needs will also drop to 100,000 tons and 667,000 tons, using the status quo and nutrition-based methods, respectively.

*Nepal basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 2,824 | 0 | (26) | 2,798 | 0 | 187 | Wheat | 10.9 |
| 1981/82 | 2,935 | 0 | (42) | 2,893 | 0 | 188 | Rice | 49.5 |
| 1982/83 | 2,464 | 0 | 83 | 2,547 | 0 | 162 | Corn | 19.6 |
| 1983/84 | 3,256 | 0 | (16) | 3,240 | 0 | 200 | Total | 80.0 |
| 1984/85 | 3,258 | 0 | (49) | 3,209 | 0 | 194 | | |
| 1985/86 | 3,275 | 0 | 25 | 3,300 | 0 | 194 | | |
| 1986/87 | 3,042 | 0 | 25 | 3,067 | 0 | 176 | | |
| 1987/88 | 3,030 | 0 | | | | | | |
| 1988/89 | 3,310 | 0 | | | | | | |

*Import requirements for Nepal*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 3,030 | 3,357 | 3,878 | 327 | 848 | 548 |
| 1988/89 | 3,310 | 3,441 | 4,007 | 131 | 697 | 358 |

*Financial indicators for Nepal, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 293 | 446 | 4 | 196 | 289 | 3 |
| 1981 | 278 | 451 | 5 | 233 | 273 | 3 |
| 1982 | 250 | 522 | 7 | 163 | 243 | 10 |
| 1983 | 275 | 502 | 12 | 123 | 263 | 5 |
| 1984 | 302 | 524 | 17 | 68 | 285 | 2 |
| 1985 | 328 | 591 | 24 | 104 | 304 | 1 |
| 1986 | 363 | 639 | 30 | 95 | 342 | |
| 1987 | 400 | 775 | 25 | 100 | 341 | 3 |
| 1988 | 445 | 865 | 40 | 100 | 355 | 3 |

*Additional food needs to support consumption for Nepal, with stock adjustment and as constrained by maximum absorbable imports*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 28 | 7 | 299 | 70 | 821 | 193 |
| 1988/89 | 30 | 7 | 100 | 23 | 667 | 150 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 299 | 70 | 821 | 193 |
| 1988/89 | | | 100 | 23 | 667 | 150 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 299 | 70 | 520 | 122 |
| 1988/89 | | | 100 | 23 | 327 | 74 |

## Sri Lanka

Estimated rice production in 1987/88 has been lowered 6 percent to 1.5 million tons, because of drought and flood damage to the July/August harvested Yala crop. Drought had already led to heavy losses to the main (Maha) rice crop, harvested in March 1987. After steadily increasing rice self-sufficiency over the last decade, this is the second consecutive year rice production will have fallen, dropping 17 percent since 1985/86. No wheat is produced, but it is the main food grain imported.

Largely because of the lowered rice production estimate, but also because of an upward revision in 1986/87 wheat stocks, Sri Lanka's estimated 1987/88 cereal import requirements have been raised. Status quo and nutrition-based import requirements are currently projected at 1.1. million tons (up 13 percent) and 981,000 tons (up 9 percent), respectively.

Sri Lanka's financial situation continues to deteriorate, with the recent drought providing an additional setback. Although the trade deficit is still forecast to narrow through 1988/89, estimated export earnings in 1987/88 have been lowered to reflect reduced supplies of traditional export commodities, such as coconut products, tea, and rubber. In addition, tourism receipts, investment, and worker's remittances are likely to continue to trend downward. With current receipts falling, debt service payments rapidly escalating, and import needs rising, the overall balance of payments is estimated to tighten. As a result, commercial import capacity has been lowered $7 million to $68 million in 1987/88. With stronger export growth and a drop in foreign debt payment obligations, commercial import capacity may increase to $93 million in 1988/89.

Additional needs to maintain recent cereal consumption levels are up markedly to an estimated 568,000 tons during 1987/88. An estimated 100,000 tons of the 1987/88 need can be met by reducing food stocks, which are high by historical standards. Including the stock adjustment, nutrition-based needs are currently estimated at 328,000 tons, up 62 percent from previous estimates. Assuming average weather and a rebound in rice production during 1988, status quo additional cereal needs are projected to decline to 417,000 tons, more than three-quarters of which is slated for stockbuilding. Using the nutrition-based method, zero needs are calculated for consumption, but additional needs of 327,000 tons for building stocks to protect against another crop shortfall are projected.

*Sri Lanka basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Commodity coverage | Share of diet |
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 1,450 | 254 | 692 | 2,198 | 0 | 146 | Wheat | 13.8 |
| 1981/82 | 1,469 | 198 | 663 | 2,142 | 0 | 139 | Rice | 42.0 |
| 1982/83 | 1,466 | 188 | 789 | 2,226 | 0 | 142 | Cassava | 3.0 |
| 1983/84 | 1,688 | 217 | 728 | 2,317 | 0 | 145 | Vegetable | |
| 1984/85 | 1,640 | 316 | 705 | 2,458 | 0 | 152 | oils | 3.5 |
| 1985/86 | 1,809 | 203 | 876 | 2,553 | 0 | 155 | Total | 62.3 |
| 1986/87 | 1,765 | 335 | 895 | 2,575 | 0 | 153 | | |
| 1987/88 | 1,500 | 420 | | | | | | |
| 1988/89 | 1,775 | 420 | | | | | | |
| Roots | | | | | | | | |
| 1980/81 | 500 | 0 | 0 | 500 | 0 | 33 | | |
| 1981/82 | 526 | 0 | 0 | 526 | 0 | 34 | | |
| 1982/83 | 573 | 0 | 0 | 573 | 0 | 37 | | |
| 1983/84 | 722 | 0 | 0 | 722 | 0 | 45 | | |
| 1984/85 | 683 | 0 | 0 | 683 | 0 | 42 | | |
| 1985/86 | 598 | 0 | 0 | 598 | 0 | 36 | | |
| 1986/87 | 600 | 0 | 0 | 600 | 0 | 36 | | |
| 1987/88 | 600 | 0 | | | | | | |
| 1988/89 | 600 | 0 | | | | | | |
| Vegetable oils | | | | | | | | |
| 1980/81 | 78 | 0 | (5) | 73 | 0 | 5 | | |
| 1981/82 | 103 | 0 | (35) | 68 | 0 | 4 | | |
| 1982/83 | 87 | 0 | (26) | 61 | 0 | 4 | | |
| 1983/84 | 37 | 0 | 1 | 38 | 0 | 2 | | |
| 1984/85 | 130 | 0 | (63) | 67 | 0 | 4 | | |
| 1985/86 | 143 | 0 | (82) | 61 | 0 | 4 | | |
| 1986/87 | 59 | 0 | (10) | 49 | 0 | 3 | | |
| 1987/88 | 90 | 0 | | | | | | |
| 1988/89 | 90 | 0 | | | | | | |

*Import requirements for Sri Lanka*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 1,500 | 2,587 | 2,481 | 1,087 | 981 | 1,157 |
| 1988/89 | 1,775 | 2,617 | 2,531 | 842 | 756 | 913 |
| Roots | | | | | | |
| 1987/88 | 600 | 681 | 595 | 81 | (5) | 175 |
| 1988/89 | 600 | 689 | 600 | 89 | (0) | 184 |
| Cereal equivalent | | | | | | |
| 1987/88 | 1,735 | 2,854 | 2,714 | 1,119 | 979 | 1,163 |
| 1988/89 | 2,010 | 2,887 | 2,766 | 877 | 756 | 922 |
| Vegetable oils | | | | | | |
| 1987/88 | 90 | 69 | 80 | (21) | (10) | (7) |
| 1988/89 | 90 | 70 | 81 | (20) | (9) | (6) |

*Financial indicators for Sri Lanka, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 1,297 | 2,205 | 229 | 246 | 1,068 | 17 |
| 1981 | 1,346 | 2,055 | 266 | 327 | 1,080 | 16 |
| 1982 | 1,305 | 2,205 | 300 | 351 | 1,005 | 12 |
| 1983 | 1,360 | 2,138 | 341 | 297 | 1,019 | 14 |
| 1984 | 1,755 | 2,121 | 317 | 511 | 1,438 | 9 |
| 1985 | 1,555 | 2,296 | 368 | 451 | 1,187 | 15 |
| 1986 | 1,513 | 2,263 | 457 | 353 | 1,056 | |
| 1987 | 1,590 | 2,270 | 570 | 265 | 870 | 12 |
| 1988 | 1,825 | 2,380 | 550 | 350 | 1,190 | 12 |

*Additional food needs to support consumption for Sri Lanka, with stock adjustment*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ws |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 505 | 68 | 568 | 76 | 428 | 57 |
| 1988/89 | 722 | 93 | 90 | 12 | 0 | 0 |
| Stock adjustment | | | | | | |
| 1987/88 | | | (100) | (13) | (100) | (13) |
| 1988/89 | | | 327 | 42 | 327 | 42 |
| Total | | | | | | |
| 1987/88 | | | 468 | 63 | 328 | 44 |
| 1988/89 | | | 417 | 54 | 296 | 38 |
| Vegetable oils | | | | | | |
| 1987/88 | 15 | 6 | 0 | 0 | 0 | 0 |
| 1988/89 | 21 | 8 | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | 74 | | 63 | | 44 |
| 1988/89 | | 101 | | 54 | | 38 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 468 | 63 | 328 | 44 |
| 1988/89 | | | 417 | 54 | 296 | 38 |
| Vegetable oils | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | | 63 | | 44 |
| 1988/89 | | | | 54 | | 38 |

Commercial import capacity surplus to additional food needs in individual commodity groups offsets some additional cereal needs.

## Southeast Asia

*Southeast Asia basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 42,590 | 2,891 | 5,538 | 261,797 | 180 |
| 1981/82 | 46,585 | 3,858 | 4,011 | 267,884 | 187 |
| 1982/83 | 45,867 | 4,381 | 4,058 | 273,882 | 185 |
| 1983/84 | 49,912 | 3,683 | 4,956 | 279,852 | 197 |
| 1984/85 | 52,227 | 3,452 | 4,292 | 286,083 | 193 |
| 1985/86 | 52,779 | 4,676 | 3,431 | 292,456 | 191 |
| 1986/87 | 53,818 | 5,022 | 3,652 | 299,091 | 193 |
| 1987/88 | 53,155 | 4,621 | | 305,774 | |
| 1988/89 | 53,915 | 4,621 | | 312,703 | |

*Southeast Asia cereal use, additional needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 63,816 | 61,087 | 1,032 | 180 | 875 | 182 |
| 1988/89 | 65,258 | 62,415 | 1,039 | 165 | 898 | 172 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 1 | 0 | 1 | 0 |
| 1988/89 | | | 297 | 52 | 42 | 10 |
| Total | | | | | | |
| 1987/88 | | | 1,034 | 180 | 876 | 183 |
| 1988/89 | | | 1,336 | 218 | 940 | 182 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 1,034 | 180 | 876 | 183 |
| 1988/89 | | | 1,336 | 218 | 940 | 182 |

### Cambodia

Although Cambodia's agricultural situation remains difficult to assess because of limited information, estimated total 1987/88 cereal production has been lowered 13 percent from earlier estimates and 15 percent below 1986/87 to 840,000 tons. The decline stems from the adverse affects of drought on the main December-January harvested rice crop, which is forecast to lower 1987/88 rice output to 800,000 tons. The secondary March-harvested crop may also be reduced, because water levels may be insufficient to support irrigation systems. As a result, status quo cereal import requirements have jumped 76 percent to 290,000 tons, while 527,000 tons would be needed to close the nutrition gap.

With an estimated commercial import capacity of $12 million (47,000 tons), Cambodia's ability to compensate for production shortfalls is extremely limited. Additional cereal needed to maintain relatively low levels of consumption is estimated at 245,000 tons in 1987/88, including 1,000 tons for stockbuilding. Estimated nutrition-based additional needs are 481,000 tons. Assuming slightly above-average production, preliminary projections for 1988/89 indicate a reduced but continuing need for additional cereals.

*Cambodia basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 1,045 | 0 | 162 | 1,157 | 0 | 203 | Wheat | 1.9 |
| 1981/82 | 854 | 50 | 180 | 1,059 | 0 | 183 | Rice | 72.9 |
| 1982/83 | 928 | 25 | 107 | 1,035 | 0 | 176 | Corn | 6.9 |
| 1983/84 | 1,111 | 25 | 185 | 1,296 | 0 | 216 | Total | 81.7 |
| 1984/85 | 922 | 25 | 85 | 1,007 | 0 | 165 | | |
| 1985/86 | 922 | 25 | 85 | 1,007 | 0 | 161 | | |
| 1986/87 | 985 | 25 | 85 | 1,070 | 0 | 168 | | |
| 1987/88 | 840 | 25 | | | | | | |
| 1988/89 | 940 | 25 | | | | | | |

*Import requirements for Cambodia*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 840 | 1,130 | 1,367 | 290 | 527 | 598 |
| 1988/89 | 940 | 1,158 | 1,413 | 218 | 473 | 532 |

*Financial indicators for Cambodia, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| | FINANCIAL DATA NOT AVAILABLE | | | | | |

*Additional food needs to support consumption for Cambodia, with stock adjustment and as constrained by maximum absorbable imports*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 47 | 12 | 243 | 63 | 480 | 124 |
| 1988/89 | 49 | 12 | 169 | 42 | 424 | 105 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 1 | 0 | 1 | 0 |
| 1988/89 | | | 42 | 10 | 42 | 10 |
| Total | | | | | | |
| 1987/88 | | | 245 | 63 | 481 | 125 |
| 1988/89 | | | 210 | 52 | 466 | 115 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 245 | 63 | 481 | 125 |
| 1988/89 | | | 210 | 52 | 466 | 115 |

## Indonesia

Because of drought and late monsoon rains, 1988/89 cereal production is expected to fall 4 percent below previous estimates and match the 1987/88 drought-reduced performance of 31.1 million tons. The rice crop estimate has been lowered 3 percent to 26.3 million tons, as farmers attempt to maintain a normal cropping pattern by increasing use of faster-maturing but lower-yielding varieties during the main (usually March-April harvested) growing season. The 1988/89 corn production estimate has been lowered 11 percent to 4.8 million tons, unchanged from the year before. A combination of dry weather during planting (September-December) and stronger incentives to expand rice production are expected to curb corn output.

As a result of the expected shortfall in 1988/89 cereal production, status quo cereal import requirements are now estimated at 2.3 million tons, up sharply from the earlier estimate of 960,000 tons. No nutrition-based import requirements are indicated, because recent gains in consumption apparently exceed the FAO/WHO recommended minimum nutritional level. Indonesia's commercial import capacity appears capable of financing all but 36,000 tons of 1988/89 calculated status quo cereal import requirement. However, additional needs of 255,000 tons are indicated for building stocks, which may fall uncomfortably low as the government increases food grain distribution to moderate inflation.

*Indonesia basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 Commodity coverage | 1979-81 Share of diet |
|---|---|---|---|---|---|---|---|---|
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 24,154 | 1,012 | 3,519 | 25,607 | 1,045 | 181 | Wheat | 2.5 |
| 1981/82 | 26,795 | 2,033 | 1,867 | 26,988 | 1,121 | 186 | Rice | 57.9 |
| 1982/83 | 26,072 | 2,586 | 2,010 | 27,355 | 1,208 | 185 | Corn | 7.9 |
| 1983/84 | 29,093 | 2,105 | 2,921 | 30,407 | 1,439 | 203 | Cassava | 6.5 |
| 1984/85 | 31,221 | 2,273 | 1,722 | 30,320 | 1,559 | 199 | Vegetable | |
| 1985/86 | 30,872 | 3,337 | 1,004 | 30,342 | 1,776 | 196 | oils | 5.0 |
| 1986/87 | 31,500 | 3,095 | 1,465 | 31,123 | 2,085 | 198 | Total | 79.8 |
| 1987/88 | 31,100 | 2,852 | | | | | | |
| 1988/89 | 31,100 | 2,852 | | | | | | |
| Roots | | | | | | | | |
| 1980/81 | 13,726 | 0 | (986) | 12,440 | 300 | 86 | | |
| 1981/82 | 13,301 | 0 | (685) | 12,356 | 260 | 84 | | |
| 1982/83 | 12,988 | 0 | (490) | 12,298 | 200 | 81 | | |
| 1983/84 | 12,103 | 0 | (256) | 11,607 | 240 | 75 | | |
| 1984/85 | 14,205 | 0 | (1,050) | 12,875 | 280 | 82 | | |
| 1985/86 | 13,762 | 0 | (1,630) | 11,842 | 290 | 74 | | |
| 1986/87 | 13,300 | 0 | (1,410) | 11,654 | 236 | 71 | | |
| 1987/88 | 13,700 | 0 | | | | | | |
| 1988/89 | 13,700 | 0 | | | | | | |
| Vegetable oils | | | | | | | | |
| 1980/81 | 1,552 | 40 | (180) | 1,357 | 0 | 9 | | |
| 1981/82 | 1,618 | 55 | (303) | 1,304 | 0 | 9 | | |
| 1982/83 | 1,703 | 66 | (414) | 1,331 | 0 | 9 | | |
| 1983/84 | 1,942 | 24 | (229) | 1,577 | 0 | 10 | | |
| 1984/85 | 2,040 | 160 | (904) | 1,266 | 0 | 8 | | |
| 1985/86 | 2,163 | 30 | (723) | 1,428 | 0 | 9 | | |
| 1986/87 | 2,156 | 42 | (675) | 1,432 | 0 | 9 | | |
| 1987/88 | 2,291 | 91 | | | | | | |
| 1988/89 | 2,431 | 91 | | | | | | |

*Import requirements for Indonesia*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 31,100 | 32,761 | 29,544 | 1,661 | (1,556) | 4,049 |
| 1988/89 | 31,100 | 33,489 | 30,157 | 2,389 | (943) | 4,819 |
| Roots | | | | | | |
| 1987/88 | 13,700 | 13,249 | 13,199 | (451) | (501) | 1,080 |
| 1988/89 | 13,700 | 13,543 | 13,402 | (157) | (298) | 1,408 |
| Cereal equivalent | | | | | | |
| 1987/88 | 36,292 | 37,782 | 34,547 | 1,489 | (1,745) | 3,744 |
| 1988/89 | 36,292 | 38,621 | 35,236 | 2,329 | (1,056) | 4,623 |
| Vegetable oils | | | | | | |
| 1987/88 | 2,291 | 1,445 | 1,453 | (846) | (838) | (505) |
| 1988/89 | 2,431 | 1,477 | 1,512 | (954) | (919) | (607) |

*Financial indicators for Indonesia, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 21,795 | 12,624 | 1,759 | 5,392 | 20,036 | 4 |
| 1981 | 23,348 | 16,542 | 2,047 | 5,014 | 21,301 | 2 |
| 1982 | 19,747 | 17,854 | 2,247 | 3,144 | 17,500 | 2 |
| 1983 | 18,689 | 17,726 | 2,548 | 3,718 | 16,141 | 5 |
| 1984 | 20,754 | 15,047 | 3,251 | 4,773 | 17,503 | 2 |
| 1985 | 18,527 | 12,705 | 4,015 | 4,974 | 14,512 | 2 |
| 1986 | 14,396 | 11,938 | 4,431 | 4,051 | 10,279 | |
| 1987 | 16,500 | 11,000 | 4,630 | 4,800 | 13,314 | 3 |
| 1988 | 17,250 | 12,000 | 5,200 | 5,200 | 13,589 | 3 |

*Additional food needs to support consumption for Indonesia, with stock adjustment and as constrained by maximum absorbable imports*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 2,045 | 353 | 0 | 0 | 0 | 0 |
| 1988/89 | 2,182 | 360 | 36 | 6 | 0 | 0 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 255 | 42 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 291 | 48 | 0 | 0 |
| Vegetable oils | | | | | | |
| 1987/88 | 104 | 18 | 0 | 0 | 0 | 0 |
| 1988/89 | 106 | 18 | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | 371 | | 0 | | 0 |
| 1988/89 | | 378 | | 48 | | 0 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 291 | 48 | 0 | 0 |
| Vegetable oils | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | | 0 | | 0 |
| 1988/89 | | | | 48 | | 0 |

Commercial import capacity surplus to additional food needs in individual commodity groups offsets some additional cereal needs.

## Laos

Because the monsoon rains were extremely weak during May-August 1987, particularly in the northern part of the country, the 1987/88 rice crop is now estimated to decline 18 percent to 750,000 tons after 3 successive years of production gains. The southern provinces will probably produce a small surplus, however, transportation difficulties and low government procurement prices may hinder movement of the rice to shortage areas. Even in years of normal production, farmers produce mainly for home consumption, with less than 15 percent officially traded through state procurement, or payment in kind of loans and the agricultural tax. The ability of Laos to compensate for rice losses incurred during the main growing season is limited, because the dry season crop usually provides less than 2 percent of total production, improved rice varieties cover only 5 percent of cultivated land, and the supply of yield-enhancing inputs is inadequate.

The rice production shortfall has caused status quo cereal import requirements in 1987/88 to now be estimated at 104,000 tons, compared with no imports indicated previously. Recent consumption levels apparently exceed the FAO/WHO recommended minimum, leaving calculated nutrition-based cereal imports unchanged at zero.

Laos' balance of payments situation remains weak as both the drought and renegotiated contract with Thailand will reduce earnings of hydroelectricity exports. Electricity sales to Thailand have accounted for roughly 75 percent of the country's hard currency earnings. Compared with earlier forecasts, Laos' commercial import capacity is estimated to have declined $10 million in both 1987/88 and 1988/89 to $46 million and $53 million, respectively.

As a result, estimates of Laos' status quo additional cereal needs for 1987/88 have risen from zero to 58,000 tons. Additional needs to meet nutrition-based consumption levels are not indicated. The Lao Government has requested 100,000 tons of rice from the international community, with about 20,000 tons pledged by the World Food Program. Preliminary projections for 1988/89 suggest a rebound in rice output, which will eliminate additional needs under both the status quo and nutrition-based methods.

*Laos basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Nonfeed use | Feed use | Per capita total use | 1979-81 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Commodity coverage | Share of diet |
| | 1,000 tons | | | | | Kilos | | Percent |
| Major cereals | | | | | | | | |
| 1980/81 | 684 | 0 | 50 | 734 | 0 | 223 | Rice | 71.2 |
| 1981/82 | 750 | 0 | 21 | 771 | 0 | 231 | Total | 71.2 |
| 1982/83 | 703 | 0 | 26 | 729 | 0 | 214 | | |
| 1983/84 | 650 | 0 | 156 | 806 | 0 | 232 | | |
| 1984/85 | 780 | 0 | 40 | 820 | 0 | 231 | | |
| 1985/86 | 875 | 0 | 20 | 895 | 0 | 248 | | |
| 1986/87 | 910 | 0 | 20 | 930 | 0 | 253 | | |
| 1987/88 | 750 | 0 | | | | | | |
| 1988/89 | 875 | 0 | | | | | | |

*Import requirements for Laos*

| Commodity/year | Production | Total use | | Import requirements | | |
|---|---|---|---|---|---|---|
| | | Status quo | Nutrition-based | Status quo | Nutrition-based | Maximum absorbable |
| | 1,000 tons | | | | | |
| Major cereals | | | | | | |
| 1987/88 | 750 | 854 | 709 | 104 | (41) | 200 |
| 1988/89 | 875 | 873 | 739 | (2) | (136) | 95 |

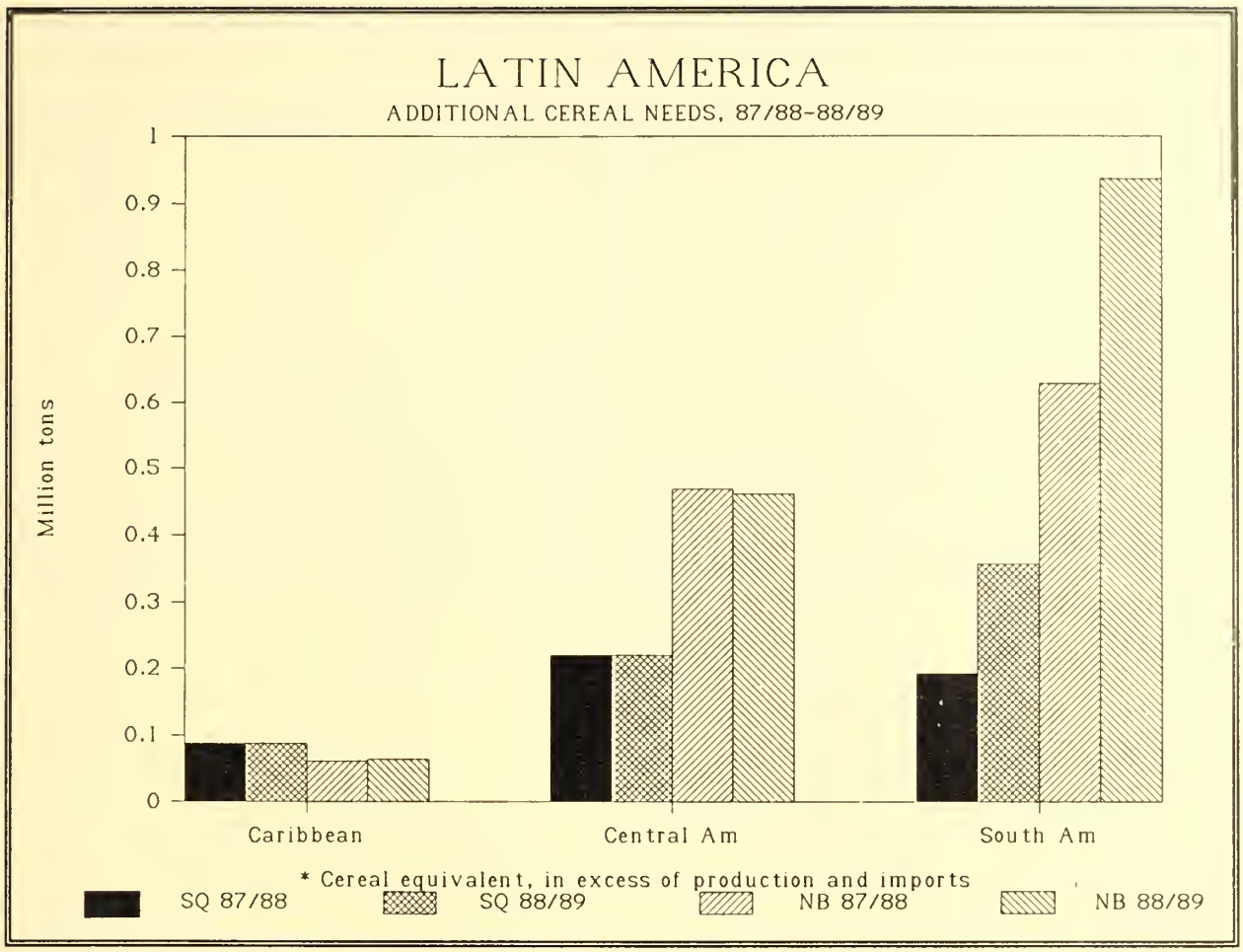
*Financial indicators for Laos, actual and projected*

| Year | Exports and other credits | Imports and other debits | Debt service | International reserves | Foreign exchange available | |
|---|---|---|---|---|---|---|
| | | | | | Total | Share to major food imports |
| | Million dollars | | | | | Percent |
| 1980 | 39 | 162 | 3 | 14 | 36 | 140 |
| 1981 | 32 | 125 | 7 | 13 | 25 | 112 |
| 1982 | 55 | 151 | 7 | 8 | 48 | 24 |
| 1983 | 50 | 167 | 7 | 19 | 43 | 27 |
| 1984 | 56 | 173 | 13 | 11 | 43 | 9 |
| 1985 | 67 | 208 | 17 | 12 | 50 | 12 |
| 1986 | 68 | 204 | 14 | 13 | 54 | |
| 1987 | 64 | 229 | 15 | 13 | 45 | 16 |
| 1988 | 69 | 235 | 15 | 14 | 51 | 16 |

*Additional food needs to support consumption for Laos, with stock adjustment and as constrained by maximum absorbable imports*

| Commodity/year | Commercial import capacity | | Status quo | | Nutrition-based | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | 1,000 tons | Million $ | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 46 | 7 | 58 | 9 | 0 | 0 |
| 1988/89 | 53 | 8 | 0 | 0 | 0 | 0 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 0 | 0 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 58 | 9 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 58 | 9 | 0 | 0 |
| 1988/89 | | | 0 | 0 | 0 | 0 |

## Latin America



## Caribbean

*Caribbean basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 852 | 99 | 979 | 12,947 | 139 |
| 1981/82 | 711 | 131 | 896 | 13,144 | 123 |
| 1982/83 | 763 | 115 | 935 | 13,345 | 125 |
| 1983/84 | 752 | 139 | 964 | 13,542 | 130 |
| 1984/85 | 801 | 95 | 1,062 | 13,680 | 138 |
| 1985/86 | 666 | 73 | 1,149 | 13,850 | 131 |
| 1986/87 | 736 | 74 | 1,075 | 14,030 | 129 |
| 1987/88 | 751 | 74 | | 14,210 | |
| 1988/89 | 754 | 74 | | 14,390 | |

*Caribbean cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 2,262 | 2,214 | 87 | 11 | 61 | 8 |
| 1988/89 | 2,293 | 2,244 | 87 | 11 | 64 | 8 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 6 | 1 | 6 | 1 |
| 1988/89 | | | 0 | 0 | 0 | 0 |
| Total | | | | | | |
| 1987/88 | | | 93 | 12 | 66 | 8 |
| 1988/89 | | | 87 | 11 | 64 | 8 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 93 | 12 | 66 | 8 |
| 1988/89 | | | 87 | 11 | 60 | 7 |

## Central America

*Central America basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --------- 1,000 tons --------- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 2,456 | 405 | 708 | 20,344 | 156 |
| 1981/82 | 2,670 | 390 | 502 | 20,759 | 155 |
| 1982/83 | 2,518 | 334 | 661 | 21,327 | 150 |
| 1983/84 | 2,656 | 324 | 677 | 21,905 | 149 |
| 1984/85 | 2,840 | 386 | 654 | 22,547 | 150 |
| 1985/86 | 2,789 | 493 | 783 | 23,230 | 154 |
| 1986/87 | 2,653 | 485 | 773 | 23,912 | 143 |
| 1987/88 | 2,865 | 485 | | 24,606 | |
| 1988/89 | 2,880 | 485 | | 25,308 | |

*Central America cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 3,723 | 3,965 | 220 | 33 | 469 | 70 |
| 1988/89 | 3,829 | 4,072 | 220 | 32 | 461 | 65 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 25 | 4 | 48 | 7 |
| 1988/89 | | | 6 | 1 | 13 | 1 |
| Total | | | | | | |
| 1987/88 | | | 244 | 37 | 517 | 77 |
| 1988/89 | | | 225 | 32 | 473 | 68 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 244 | 37 | 457 | 68 |
| 1988/89 | | | 225 | 32 | 411 | 59 |

## South America

*South America basic food data*

| Commodity/year | Actual or forecast production | Beginning stocks | Net imports | Population | Per capita total use |
|---|---|---|---|---|---|
| | --- 1,000 tons --- | | | Thousand | Kilos |
| Major cereals | | | | | |
| 1980/81 | 3,898 | 1,016 | 2,589 | 55,803 | 116 |
| 1981/82 | 4,452 | 1,056 | 2,552 | 57,032 | 122 |
| 1982/83 | 4,486 | 1,089 | 2,496 | 58,319 | 121 |
| 1983/84 | 4,056 | 1,037 | 2,889 | 59,657 | 119 |
| 1984/85 | 4,779 | 864 | 2,367 | 61,046 | 114 |
| 1985/86 | 4,546 | 1,049 | 2,639 | 62,486 | 114 |
| 1986/87 | 4,464 | 1,081 | 3,119 | 63,955 | 119 |
| 1987/88 | 4,897 | 1,041 | | 63,955 | |
| 1988/89 | 5,210 | 1,041 | | 66,075 | |

*South America cereal use, additional food needs to support consumption, and stock adjustment*

| Commodity/year | Total use | | Additional needs | | | |
|---|---|---|---|---|---|---|
| | Status quo | Nutrition-based | Status quo | | Nutrition-based | |
| | | | Quantity | Value | Quantity | Value |
| | 1,000 tons | 1,000 tons | 1,000 tons | Million $ | 1,000 tons | Million $ |
| Cereal equivalent consumption | | | | | | |
| 1987/88 | 10,392 | 10,420 | 192 | 33 | 628 | 97 |
| 1988/89 | 10,744 | 10,778 | 356 | 54 | 937 | 133 |
| Stock adjustment | | | | | | |
| 1987/88 | | | 0 | 0 | 57 | 7 |
| 1988/89 | | | 70 | 9 | 70 | 9 |
| Total | | | | | | |
| 1987/88 | | | 192 | 33 | 685 | 104 |
| 1988/89 | | | 427 | 63 | 1,007 | 142 |
| Maximum absorbable | | | | | | |
| Cereal equivalent | | | | | | |
| 1987/88 | | | 192 | 33 | 546 | 82 |
| 1988/89 | | | 427 | 63 | 861 | 120 |

## GLOSSARY OF TERMS

| | |
|---|---|
| Status quo | A measure of per capita food availability in recent years |
| Nutrition-based | Per capita food availability sufficient to meet internationally accepted minimum caloric standards |
| Cereal equivalent | Cereal required to meet both cereal shortfalls and cereal equivalent |
| Import requirement | Imports necessary to achieve either status quo or nutrition-based food availability, including both commercial and concessional food shipments |
| Tons | Metric tons |
| Dollars | US dollars unless otherwise specified |
| GNP | Gross national product |
| GDP | Gross domestic product |



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